



# Annual Public Health Report of the Province of Assam for the year 1937

BY

LIEUT.-COLONEL A. M. V. HESTERLOW, M.B., CH.B. (EDIN.),  
B.SC., P.H. (EDIN.), D.T.M. & H. (EDIN.), I.M.S.,  
DIRECTOR OF PUBLIC HEALTH, ASSAM



SHILLONG

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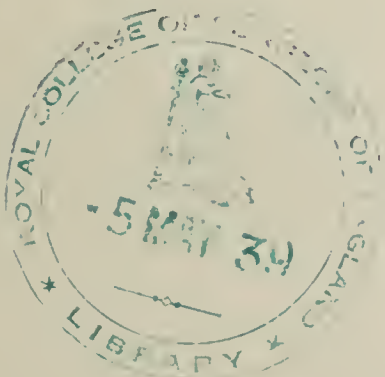




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OFFICE OF THE DIRECTOR OF PUBLIC HEALTH, ASSAM

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LETTER No. 12700.

FROM

LIEUT.-COLONEL A. M. V. HESTERLOW, M.B., CH.B., (EDIN.),  
B.SC., P.H. (EDIN.), D.T.M. & H. (EDIN.), I.M.S.,  
DIRECTOR OF PUBLIC HEALTH, ASSAM,

TO

THE SECRETARY TO THE GOVERNMENT OF ASSAM  
IN THE EDUCATION AND LOCAL SELF-GOVERNMENT  
DEPARTMENTS.

*Dated Shillong, the 31st August 1938.*

SUBJECT :—PUBLIC HEALTH REPORT FOR THE YEAR 1937.

SIR,

I HAVE the honour to submit herewith the Annual Public Health Report for the year 1937.

Your obedient servant,

A. M. V. HESTERLOW,  
*Lieut.-Colonel, I.M.S.,  
Director of Public Health, Assam.*



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# Annual Public Health Report of the Province of Assam for the year 1937

## CHAPTER I

### METEOROLOGY, ECONOMIC CONDITIONS, *i.e.*, PRICES OF FOOD-GRAINS, ETC.

The Meteorologist, Calcutta, has furnished the following note on the chief meteorological conditions of the Province of Assam for the year 1937 :—

*The cold weather period—January and February.*—In January no disturbances from the west affected the province, where only scattered thundershowers occurred occasionally, consequently rainfall was in defect by 85 per cent, skies were less clouded than usual. Minimum temperature was in slight defect. In February two western disturbances produced more than usual clouds and 29 per cent. more than average rainfall.

*The hot weather period—March to May.*—During March only 21 per cent. of normal rainfall was recorded though as many as four disturbances from the west affected the province. In April two western disturbances caused local thundershowers giving only 41 per cent. of average rainfall, cloud proportion and humidity were in defect, and mean temperature was above normal during these two months. There was an improvement in the conditions during the next month with rainfall 20 per cent. in excess owing to an unusual activity of thunderstorms during the first two weeks and an advance of the south-west monsoon during the last week.

*The monsoon period—June to September.*—The weather over the province during the period was governed more or less by the disturbances in the north Bay of Bengal. Under the influence of these disturbances the monsoon was fairly active in the months of June, July and September with a little less than the average rainfall. In the month of August the monsoon was strong in the province and in association with two disturbances, one in the north Bay of Bengal and the other in west Bengal, there was occasional heavy rain. According to Press reports, as a result of heavy rains widespread and disastrous floods occurred causing great loss of life and property and many breaches in railway lines. The total rainfall was 16 per cent. above normal and cloud proportion was in slight excess during the month.

*The retreating monsoon period—October to December.*—The monsoon was active only for a few days in the third week in October after which it withdrew from the province. Under the influence of a severe Bay storm which filled up over lower Assam on the 16th, there was widespread and locally heavy rain in the province between the 14th and 16th. The month's rainfall was 8 per cent. in excess. In November rain fell locally towards the end of the month in association with a deep depression in the central Bay of Bengal and the total rainfall was 48 per cent. in defect. But in December rainfall occurred locally under the influence of a low pressure area off the Chittagong coast during the first week and scattered thundershowers occurred during the rest of the month ; the total rainfall was 48 per cent. in excess and cloud proportion was higher than usual.

Economic conditions, prices of food-grains, etc. 2. The report deals with the plains districts of the Province. The staple diet of the province is rice. The average quantity of common rice sold per rupee in 1937 and in the previous 5 years is shown in the table below :—

Districts	1932	1933	1934	1935	1936	1937
1	2	3	4	5	6	7
	S. ch.	S. ch.	S. ch.	S. ch.	S. ch.	S. ch.
Cachar ... ..	15 4	14 11	12 0	15 10	13 10	14 10
Sylhet ... ..	10 9	13 12	11 10	12 7	12 3	12 12
Goalpara ... ..	14 12	16 1	12 5	13 7	12 0	11 12
Kamrup ... ..	14 4	15 7	11 4	11 15	12 3	11 4
Darrang ... ..	12 12	14 8	13 6	13 10	14 11	14 0
Nowgong ... ..	13 12	15 7	12 10	15 5	14 4	13 6
Sibsagar ... ..	10 9	11 13	11 7	11 14	11 14	11 15
Lakhimpur ... ..	10 8	11 13	11 1	11 12	11 11	11 15



From the figures given in the above table it will be seen that except in Cachar and Sylhet districts there was a tendency for the price of rice to rise during the year under report. The provincial birth and death-rates were 31·31 and 22·21 respectively in 1937 against 30·24 and 19·63 respectively in 1936, being also an increase over the rates in 1935.

## CHAPTER II

### VITAL STATISTICS

(Including population and Emigration and Immigration).

3. The report deals with the plains districts of the province, the population of which, according to the census of 1931, was 7,927,953 (4,187,085 males and 3,740, 868 females).  
General Census figures.

As usual the birth and death-rates have been calculated on the population enumerated at the last census without taking into consideration the growth of population during the year. The appended table drawn up in accordance with the orders of Government shows the corrected population of each district under registration and what the birth and death-rates calculated on corrected population would have been :—

Table "D" for the year 1937

Districts	Mid year population	Number of births	Birth-rate per mille based on the intercensal population	Birth-rate per mille based on the present method	Number of deaths	Death-rate per mille based on the intercensal population	Death-rate per mille based on the present method	Difference in the birth-rates (5) — (4)	Difference in the death-rates (8) — (7)
1	2	3	4	5	6	7	8	9	10
Cachar ...	597,785	20,242	34·91	37·57	13,813	23·82	25·64	+2·66	+1·82
Sylhet ...	2,943,520	98,923	33·61	36·31	72,758	24·72	26·71	+2·70	+1·99
Goalpara ...	933,086	31,110	33·34	35·24	20,186	21·63	22·87	+1·90	+1·24
Kamrup ...	1,021,099	19,266	18·87	19·72	11,570	11·33	11·85	+·85	+·52
Darrang ...	615,456	17,896	29·08	30·60	13,439	21·84	22·98	+1·52	+1·14
Nowgong ...	586,096	11,784	20·11	20·95	7,701	13·12	13·69	+·84	+·87
Sibsagar ...	990,705	25,910	26·15	27·76	16,240	19·42	20·61	+1·61	+1·19
Lakhimpur ...	766,236	23,093	30·14	31·87	17,347	22·64	23·91	+1·73	+1·27
Total for the Province.	8,435,983	248,224	29·42	31·31	176,054	20·87	22·21	+1·89	+1·34

Registration continues to be carried out in the same areas of the Hill Districts as before and its results are shown separately in paragraph 11 of this report.



The birth-rate of the province for the year 1937 was 31·31 as compared with 30·24 in the preceding year and is compared below with the ratios recorded in other provinces in India and Burma:—

Provinces	Birth-rate		
	1932-36	1936	1937
1	2	3	4
Assam ... ..	30·44	30·24	31·31
Bengal ... ..	30·35	33·53	34·20
Bihar ... ..	...	35·34	34·13
Orissa ... ..	...	36·63	34·75
Central Provinces ... ..	40·33	42·50	40·65
Madras ... ..	36·49	37·76	38·72
Burma ... ..	31·02	34·27	34·55
Bombay ... ..	40·11	41·40	40·68
United Provinces ... ..	37·13	38·99	35·92
Punjab ... ..	44·39	46·85	46·49
North West Frontier Province ... ..	30·92	32·64	50·74
Sind ... ..	20·11	...	19·96

The birth-rate of Assam was lower than that of any other province except Sind.

4. The total number of births registered during the year under report was 248,224 as compared with 239,704 in the preceding year thus yielding a birth-rate of 31·31 per 1,000 of population against 30·24 in the previous year. The number of births registered in 1937 was higher than that recorded in 1936 by 8,520. The average birth-rate for the previous 5 years was 30·44. The highest birth-rate was recorded in the district of Cachar (37·57) followed by Sylhet (36·31), Goalpara (35·24) and Lakhimpur (31·87). These four districts returned birth-rates above and the other four districts below the provincial average (31·31). The lowest birth-rate was recorded in the district of Kamrup (19·72).

The highest birth-rate of 40·55 in December was followed by 39·93 in January. The lowest rate (23·27) was recorded in June. During the year under review births exceeded deaths by 72,170 or 9·10 per mille of population. The number of males to every 100 females born was 107.

5. The total number of births recorded in urban areas during the year 1937 was 6,705 and the birth-rate per mille of population was 34·21 as compared with 6,349 and 32·39 respectively in the preceding year. The highest rate was recorded in the town of Palasbari 57·32 in the Kamrup district followed by Barpeta (52·98) in the same district, Hailakandi (51·44) in Cachar, Nowgong (42·73), Sunamganj (38·86) in Sylhet, Jorhat (37·68) in Sibsagar, Dhubri (35·29), Goalpara (34·45) in Goalpara and Golaghat (34·34) in Sibsagar. The lowest rate (13·16) was recorded in the town of Doom Dooma in the Lakhimpur district as in previous years. As noted in previous years, the proportion of females to males residing in this town is very low. The birth-rate exceeded the death-rate in all towns. The excess varied from 32·71 in Palasbari to 2·64 in Haflong.

6. The total number of births registered in rural areas during the year under review was 241,519 or 31·24 per mille of population, as compared with 233,355 and 30·18 respectively in the previous year. Considering registration circles individually, the highest rate was recorded in the Kalaigaon circle (61·17) in the Darrang district followed by Gosaingaon (53·60) in Goalpara, Hailakandi (47·98) in Cachar, Fenchuganj (46·03) and Lakhai (45·54) in Sylhet. The circles reporting low birth-rates were Boko (6·86) and Sorbhog (7·54) in Kamrup and Kuoritol (8·40) in Nowgong. The low rates are probably due to defective registration.

The death-rate of the province for the year 1937 was 22·21 against 19·63 in the preceding year, and is compared below with the rates of other provinces in India and Burma :—

Provinces							Death-rate		
							1932-36	1936	1937
							2	3	4
1									
Assam	...	...	...	...	...	...	19·19	19·63	22·21
Bengal	...	...	...	...	...	...	23·05	24·50	24·70
Bihar	...	...	...	...	...	...	...	21·68	22·53
Orissa	...	...	...	...	...	...	...	27·84	28·63
Central Provinces	...	...	...	...	...	...	31·98	34·89	32·63
Madras	...	...	...	...	...	...	23·75	23·30	23·99
Burma	...	...	...	...	...	...	19·78	21·84	24·76
Bombay	...	...	...	...	...	...	27·25	27·73	27·50
United Provinces	...	...	...	...	...	...	23·01	22·61	21·38
Punjab	...	...	...	...	...	...	25·88	23·97	23·71
North West Frontier Province...	...	...	...	...	...	...	19·93	17·92	21·27
Sind	...	...	...	...	...	...	13·28	...	12·09

The death-rate of Assam was lower than any other province except United Provinces, North West Frontier Province and Sind.

7. The total number of deaths registered in the province during 1937 was 176,054 as compared with 155,601 in the preceding year, the death-rate per 1,000 of population being 22·21 and 19·63 respectively. The number of deaths registered in 1937 was higher than that recorded in 1936 by 20,453. The quinquennial average was 19·19. The districts of Cachar, Sylhet, Goalpara, Darrang, Sibsagar and Lakhimpur returned death-rates above and the other two districts below the quinquennial average. The highest death-rate was recorded in the district of Sylhet (26·71) followed by Cachar (25·64), Lakhimpur (23·91), Darrang (22·98) and Goalpara (22·87). The death-rate was lowest in the Kamrup district (11·85).

The appended table shows the number of deaths reported from each district in 1937, as compared with that of 1936 :—

Districts					1936	1937	Increase or decrease
1					2	3	4
Cachar	...	...	...	...	11,858	13,813	+1,955
Sylhet	...	...	...	...	59,552	72,758	+13,206
Goalpara	...	...	...	...	20,286	20,186	—100
Kamrup	...	...	...	...	11,319	11,570	+251
Darrang	...	...	...	...	12,083	13,439	+1,356
Nowgong	...	...	...	...	6,506	7,701	+1,195
Sibsagar	...	...	...	...	17,712	19,240	+1,528
Lakhimpur	...	...	...	...	16,285	17,347	+1,062
Total	...	...	...	...	155,601	176,054	+20,453

The number of male deaths to every 100 female deaths was 107.

8. The total number of deaths registered during the year under report in urban areas in which registration is compulsory was 3,798 yielding a death-rate of 19·38 as compared with 3,623 and 18·48 in 1936. The quinquennial average was 18·00. The highest death-rate was reported from Hailakandi (30·97). The increase is due to a large number of deaths recorded



in this town under " Fevers " and " All other causes ". Other high rates were recorded in Haflong (30·25), Golaghat (28·80), and Barpeta (28·53). " Fevers " and " All other causes " were responsible for the high death-rates in each of these towns. Low rates was recorded in Doom Dooma (6·32) and Tinsukia (11·82).

The number of deaths recorded under each of the main heads of mortality in towns in the years 1936 and 1937 are shown in the table below :—

Head of mortality						1936	1937	Increase or decrease in 1937
1						2	3	4
Cholera	...	...	...	...	...	50	28	—22
Small-pox	...	...	...	...	...	64	34	—30
Fevers	...	...	...	...	...	979	1,139	+160
Dysentery and Diarrhoea	...	...	...	...	...	455	507	+52
Respiratory Diseases	...	...	...	...	...	441	477	+36
Injuries	...	...	...	...	...	122	109	—13
All other causes	...	...	...	...	...	1,512	1,504	— 8
Total						3,623	3,798	+175

9. The total number of deaths registered in 1937 in rural areas was 172,256 or 22·28 per mille of population against 151,978 and 19·66 in the previous year. The quinquennial average was 20·04.

Death registration in rural areas.

The number of deaths in rural circles under each of the main heads of mortality in the years 1937 and 1936 is compared in the subjoined table :—

Head of mortality						1936	1937	Increase or decrease in 1937
1						2	3	4
Cholera	...	...	...	...	...	3,766	5,412	+1,646
Small-pox	...	...	...	...	...	899	2,153	+1,254
Fevers	...	...	...	...	...	96,261	108,236	+11,975
Dysentery and Diarrhoea	...	...	...	...	...	10,658	12,375	+1,717
Respiratory Diseases	...	...	...	...	...	5,984	6,225	+241
Injuries	...	...	...	...	...	1,920	1,801	—119
All other causes	...	...	...	...	...	32,490	36,054	+3,564
Total						151,978	172,256	+20,278

As in the previous year the highest rate was reported from Kalaigaon circle (52·05) in the Darrang district. Other circles reporting high rates were Jaintiapur (40·16) and Badarpur (38·37) in Sylhet, Gosaingaon (37·31) in Goalpara, Kanaighat (35·96) and Lakhai (34·62) in Sylhet, Panery (33·19) in Darrang and Golokganj (33·16) in Goalpara. The lowest rate was returned from Boko (3·82) in the Kamrup district as in 1936. Low rates were also reported from Sorbhog (4·81) and Hajo (6·17) in Kamrup.

The cause "Fevers" was mainly responsible for the high death-rates in the areas mentioned above, other contributory causes being small-pox in Badarpur, small-pox and cholera in Kanaighat and cholera in Lakhai.



10. Mortality was highest (26·34) in the month of June and lowest (16·48) in March. "Fevers" was mainly responsible for the highest death-rate in June.

11. Registration of births and deaths continues to be carried out in the same limited areas in the hill districts as before. The birth and death-rates in these areas in 1937 are compared in the table below with those of 1936 :—

Districts	Population under registration	1936		1937	
		Birth-rate	Death-rate	Birth-rate	Death-rate
1	2	3	4	5	6
Khasi and Jaintia Hills ...	64,128	27·37	17·31	29·88	19·60
Naga Hills ...	3,974	57·79	41·19	58·68	41·19
Lushai Hills ...	124,404	43·75	28·34	45·36	25·39
Garo Hills ...	190,911	26·71	21·43	29·46	20·85
Sadiya Frontier Tract ...	21,118	28·93	22·73	29·50	22·26

From the above table it will be seen that the birth-rate in all the hill districts during the year under report was higher than that in the preceding year. The death-rates except those in the Khasi and Jaintia Hills and Naga Hills, were lower than that of the preceding year.

The total number of births and deaths registered in the Khasi and Jaintia Hills during 1937 was 1,916 and 1,257 respectively. During the year under review three cases of cholera were reported from Nongstoin village and one case occurred in the Shillong Municipality. The case was imported from Dacca. There were no deaths from cholera. A total of 13 attacks with two deaths from small-pox were reported from rural areas during the year under review. A total of 5 deaths from *kala-azar* was reported from rural areas. A total of 25,308 cases of malaria was treated in the dispensaries of the district as compared with 20,480 in 1936. In 1937 six hundred and eleven boxes of quinine were sold against six hundred and fourteen boxes in 1936.

The total number of births and deaths recorded in Shillong during 1937 was 766 or 35·96 per mille and 363 or 17·04 per mille respectively as compared with 715 or 33·57 per mille and 315 or 14·79 per mille respectively in 1936.

The table below shows the number of cases and deaths from infectious diseases recorded by the Shillong Municipality in 1937 :—

Disease							Attacks	Deaths
1							2	3
1. Cholera	...	...	...	...	...	...	1	...
2. Enteric fever	...	...	...	...	...	...	59	11
3. Cerebrospinal Meningitis	...	...	...	...	...	...	2	2
4. Tuberculosis	...	...	...	...	...	...	44	16
5. Diptheria	...	...	...	...	...	...	22	4
Total	...	...	...	...	...	...	128	33

A total of 5 cases of leprosy was also recorded. The general condition of the health of Shillong was not good during the year under review.

In the Naga Hills registration of births and deaths is undertaken in the Kohima town and Dimapur rural circle, the combined population of which according to the census of 1931 is 3,974. The birth and death-rates as given against this district do not, therefore, accurately indicate the health of the whole district. Cerebrospinal Meningitis appeared in epidemic form during the year under report. The district was free from cholera and small-pox. Anti-malarial measures were carried on at Dimapur. Eighty-eight boxes of quinine were sold during 1937 against seventy-five in the previous year.

The total number of births and deaths was 5,643 and 3,159 respectively. The general health of the district during the year under review was almost the same as in previous year. There were 76 attacks of small-pox with 15 deaths in Goboichera village situated near the boundary between the district and Sylhet. The infection was imported from the plains. The only source of water-supply for Aijal is an artificial tank. No proper sanitation measures are possible in the town owing to entire lack of any water for the purpose. The campaign against syphilis was continued during the year. A total of 49 cases of Yaws was treated in 1937 against 78 cases in the preceding year. Ten cases of leprosy were treated during the year under review. A total of 1,389 packets of quinine was sold during 1937 against 1,100 in 1936.

The birth-rate was higher and the death-rate was lower in 1937 than in 1936. The diseases which were prominent were malaria and *kala-azar*. They were prevalent on the Northern and Western borders of the district. Malaria appears to be on the increase, while *kala-azar* is declining in the district. There were 10 deaths from cholera against 9 in the preceding year. Fevers were responsible for 990 deaths. During the year 114 lepers were treated in the Tura Leper colony. One hundred and forty-two cases of Yaws were treated. Only 42 packets of quinine were sold during the year against 122 in 1936. The decrease is attributed to the free supply of quinine made available during the year.

The total numbers of births and deaths recorded during the year were 623 and 470 against 611 and 480 respectively. "Fevers" were responsible for 290 deaths. Two cases of *kala-azar* were treated in the Civil Hospital at Sadiya. There was an outbreak of small-pox in the Pasighat Subdivision during the year. There were 44 attacks with no deaths, and 3,048 vaccinations were performed in the infected areas. Seventy-five boxes of quinine were sold against 86 in 1936.

Births and deaths are not recorded in this State. There were 71 attacks and 37 deaths from cholera. There were 477 attacks and 147 deaths from small-pox. Only 3 packets of quinine treatments were sold during the year.

12. The table below shows the birth and death-rates reported from the tea estates during the year 1937 as compared with those of the preceding year :—

Districts					Birth-rate		Death-rate	
					1936	1937	1936	1937
1					2	3	4	5
Cachar	...	...	...	...	32.58	34.85	20.46	22.7
Sylhet	...	...	...	...	30.46	25.37	15.14	14.08
Goalpara	...	...	...	...	38.85	39.11	20.54	37.43
Kamrup	...	...	...	...	29.57	32.32	21.05	20.91
Darrang	...	...	...	...	28.62	25.20	16.45	17.02
Nowgong	...	...	...	...	30.34	27.35	18.90	19.63
Sibsagar	...	...	...	...	39.69	37.43	27.37	27.10
Lakhimpur	...	...	...	...	43.34	42.35	31.52	31.16
Total	...	...	...	...	36.05	34.18	23.38	23.58



The birth and death-rates were in excess of the provincial rates, which were 31·31 and 22·21. The total number of births and deaths on Tea Estates in 1937 was 33,500 and 23,114 respectively as compared with 35,616 and 23,098 respectively in the preceding year. The largest number of deaths was recorded under "Other Causes" (9,347) and this is followed by "Fevers" (4,638). Dysentery and Diarrhoea (4,349) and Respiratory Diseases (4,267). A total of 220 deaths from cholera and 10 deaths from small-pox was recorded during the year under report. There were 113 deaths from *kala-azar* during the year against 72 in the preceding year.

13. The total number of births and deaths within railway limits during the year 1937 was 428 and 330 against 207 and 181 respectively in the preceding year. As in previous years the largest number of births and deaths was reported from Lakhimpur district. The highest mortality was recorded under "Other Causes" (132) and this was followed by "Respiratory Diseases" (95) during the year under review.

A total of 90,875 males and 85,179 females died in 1937 as compared with 81,498 and 74,103 respectively in 1936. The death-rate for males was 21·70 and the death-rate for females 22·77. These rates are higher than the corresponding rates in 1936 by 2·24 and 2·96 respectively. They were also greater by 1·90 for males and by 2·57 for females than the rates of the previous quinquennium. The female death-rate exceeded the male death-rate in all the districts except Sylhet. The highest death-rate for males was returned from Sylhet (26·89) and the highest death-rate for females was returned from Cachar (27·39). The lowest death-rates for both the sexes were returned from the Kamrup district, *viz.*, 11·70 for males and 12·00 for females.

During the year the number of deaths according to classes was as follows:—  
 Mortality according to classes. Hindus, 98,242; Muhammadans, 65,066; Christians, 1,923, Buddhists, 147; other classes, 10,676. The death-rates per mille by classes are shown in the subjoined table:—

Classes				Ratio of deaths per mille, 1936	Ratio of deaths per mille, 1937	Difference
1				2	3	4
Hindus	...	...	...	18·50	20·35	+1·85
Muhammadans	...	...	...	19·93	23·72	+3·79
Christians	...	...	...	20·95	24·45	+3·50
Buddhists	...	...	...	11·69	13·42	+1·73
Other classes	...	...	...	36·73	39·95	+3·22

The district of Sylhet recorded the highest mortality rate both among the Hindus (24·34) and Muhammadans (28·33). The lowest rates (2·81 and 7·49) for these two principal communities were returned from the Kamrup district.

The table below shows the rate of mortality by sexes in different age groups and the excess or defect of the female death-rates:—  
 Mortality according to age.

Age periods				1937		Excess or defect of female death-rate
				Male	Female	
1				2	3	4
Under one year	...	...	...	166·49	153·15	—13·34
1 and under 5	...	...	...	63·73	83·22	+19·49
5 and under 10	...	...	...	16·87	21·04	+4·17
10 and under 15	...	...	...	5·87	6·98	+1·11
15 and under 20	...	...	...	5·10	6·92	+1·82
20 and under 30	...	...	...	21·20	30·35	+9·15
30 and under 40	...	...	...	16·88	18·99	+2·11
40 and under 50	...	...	...	13·73	11·26	—2·47
50 and under 60	...	...	...	13·60	10·12	—3·48
60 and upwards	...	...	...	83·33	64·05	—19·28
Total	...	...	...	21·73	22·77	+1·04



It will be seen that the highest mortality was recorded amongst infants under one year of age and lowest amongst both males and females between 15-20 years of age.

The table below shows the deaths and death-rates amongst infants, calculated on the births for the last 10 years :—

Year	Births			Death of infants			Death-rate of infants		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10
1927	107,461	99,828	207,289	19,253	16,266	35,519	179·16	162·94	171·35
1928	110,774	103,283	214,057	20,233	16,587	36,820	182·65	160·50	172·01
1929	116,177	108,417	224,594	19,374	15,987	35,361	166·76	147·46	157·44
1930	110,400	104,345	214,835	20,166	17,310	37,476	182·66	165·75	174·44
1931	115,139	107,867	223,006	18,465	15,624	34,089	160·37	144·84	152·86
1932	122,845	115,474	233,319	20,398	16,918	37,316	166·05	146·51	156·58
1933	126,882	119,236	246,118	21,903	18,328	40,231	172·62	153·71	163·46
1934	125,740	117,016	242,756	21,893	18,250	40,143	174·11	155·96	165·36
1935	123,668	116,230	239,898	21,015	18,140	39,155	169·93	156·07	163·22
1936	123,839	115,865	239,704	19,630	16,522	36,152	158·51	142·59	150·82
1937	128,233	119,991	248,224	21,350	18,377	39,727	166·49	153·15	160·04

The infant mortality of the Province in 1937 was higher than it was in 1929, 1931, 1932 and 1936 but lower than that of the other years. A total of 39,727 infants died during the year and of these 19,390 or 48·8 per cent. died within one month of birth, 13,033 or 32·8 per cent. died between one to six months and 7,304 or 18·3 per cent. between six months to 12 months.

The infant mortality rate of Assam for 1937 is compared in the appended table with that of other Provinces in India and Burma :—

Provinces								Rates
Assam	...	...	...	...	...	...	...	160·04
Bengal	...	...	...	...	...	...	...	176·2
Orissa	...	...	...	...	...	...	...	214·66
Bihar	...	...	...	...	...	...	...	115·22
Central Provinces	...	...	...	...	...	...	...	218·60
Madras	...	...	...	...	...	...	...	162·70
Burma	...	...	...	...	...	...	...	203·04
Bombay	...	...	...	...	...	...	...	160·74
United Provinces	...	...	...	...	...	...	...	142·33
Punjab	...	...	...	...	...	...	...	163·04
North West Frontier Province	...	...	...	...	...	...	...	148·61
Sind	...	...	...	...	...	...	...	118·02

The infant mortality rate in Assam for 1937 compares favourably with that of Bengal, Orissa, Central Provinces, Madras, Burma, Bombay and Punjab. The heavy mortality amongst infants is due in large measure to immaturity and ignorance on the part of the mother, improper feeding, and exposure of infants to insanitary surroundings. Vigorous educational measures in this respect are indicated. The number of still births recorded during the year 1937 was 9,522 *viz.*, Hindus (4,376), Muhammadans (4,503), Christians (101), Buddhists (5) and other classes (537). Out of 9,522 still births 5,304 were males and 4,218 females.

The percentage of still births to live births was 3·83 in the year under report as compared with 3·72 in the previous year.

A chart showing the infant mortality rate in Assam from 1912 to 1937 is attached (*See Chart No. I*).

14. The defects in registration of vital occurrences during the year under report in compulsory urban areas, as ascertained by the vaccination inspecting staff, are shown in table below :—

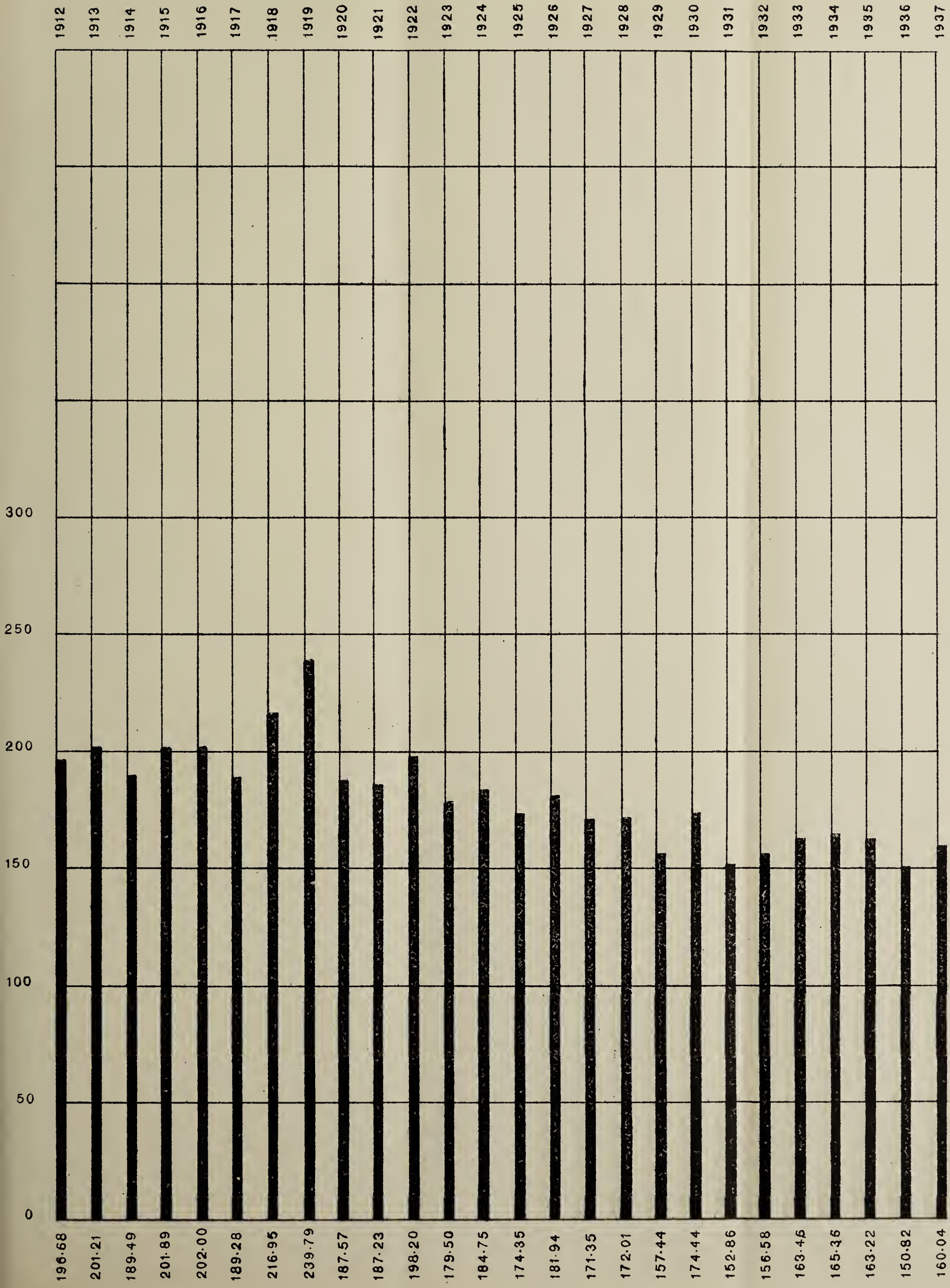
Municipalities	Unregistered vital occurrences during the year 1937		Recorded vital occurrences		Percentage of omissions	
	Births	Deaths	Births	Deaths	Births	Deaths
1	2	3	4	5	6	7
Silchar ... ..	4	...	333	164	1.20	...
Hailakandi ... ..	7	2	79	34	8.85	5.88
Haflong ... ..	...	...	38	34	...	...
Sylhet ... ..	6	6	711	362	.84	1.65
Karimganj ... ..	...	...	184	134	...	...
Maulvi Bazar ... ..	5	3	144	71	3.47	4.22
Sreemangal ... ..	8	...	51	24	...	...
Habiganj ... ..	...	...	250	162	...	...
Sunamganj ... ..	6	5	65	36	9.23	13.89
Dhubri ... ..	31	1	303	30	10.23	3.33
Goalpara ... ..	7	...	128	51	5.46	...
Gauripur ... ..	8	8	159	112	5.03	7.14
Gauhati ... ..	19	8	527	117	3.60	6.83
Barpeta ... ..	...	...	145	70	...	...
Polashbari... ..	3	3	202	118	1.48	2.54
Tezpur ... ..	6	2	180	73	3.33	2.74
Mangaldai ... ..	3	1	131	73	2.29	1.37
Nowgong ... ..	24	5	445	212	5.39	2.36
Jorhat ... ..	21	8	338	112	6.21	7.14
Sibsagar ... ..	8	1	282	28	2.83	3.57
Golaghat ... ..	23	6	88	13	26.13	46.15
Nazira ... ..	...	...	110	16	...	...
Dibrugarh ... ..	24	1	181	43	14.47	2.32
North Lakhimpur ... ..	6	1	77	35	7.79	2.91
Doom Dooma ... ..	5	2	26	7	19.23	28.55
Tinsukia ... ..	3	2	38	12	7.89	16.66
Shillong ... ..	...	4	768	351	...	1.11

During the year 1937, 272 persons in the 27 Municipal towns where registration is compulsory were prosecuted for failing to report vital occurrences and 203 were convicted. The fines imposed amounted to Rs. 135-8-0.

No omissions were detected in the towns of Haflong, Karimganj, Habiganj, Barpeta and Nazira.

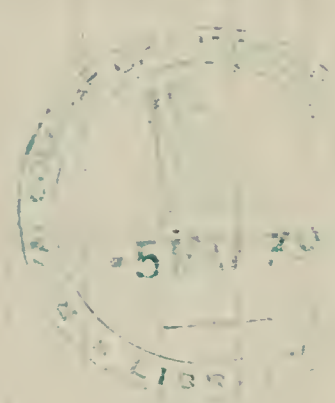


CHART NO. I  
Infant Mortality (per 1,000 of Births) in the Province of Assam  
from 1912 to 1937





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15. The vaccination inspecting staff verified the records of 39,490 births and 20,997 deaths, as compared with 40,513 and 24,243 respectively in the previous year. The percentage of omissions detected was 10·73 in respect of births and 2·22 in respect of deaths as compared with 5·57 and 2·54 respectively in 1936. As in previous years, the district of Sylhet stood first with 16,435 entries tested followed by Darrang with 8,666 and Cachar with 8,545. Goalpara stood last with 3,935 entries tested during the year. Out of a total of 248,224 births and 176,054 deaths only 45,463 and 23,491 respectively were verified, yielding percentages of 18·31 and 13·34 respectively. More extensive verification of vital statistics is necessary.

16. During the year under report there was no change in the agencies engaged in the collection of vital statistics either in urban or rural areas. As usual, weekly epidemic reports and monthly returns of vital statistics were regularly published in the Provincial Gazette and in certain papers for the information of the general public.

17. A statement showing month by month the number of labourers entering Assam by different routes during the year 1937 is appended below :—

Month								Total number of immigrants into Assam during the year 1937
January ...	...	...	...	...	...	...	...	4,590
February ...	...	...	...	...	...	...	...	6,650
March ...	...	...	...	...	...	...	...	8,002
April ...	...	...	...	...	...	...	...	4,670
May ...	...	...	...	...	...	...	...	3,330
June ...	...	...	...	...	...	...	...	1,711
July ...	...	...	...	...	...	...	...	701
August ...	...	...	...	...	...	...	...	255
September ...	...	...	...	...	...	...	...	180
October ...	...	...	...	...	...	...	...	137
November ...	...	...	...	...	...	...	...	195
December ...	...	...	...	...	...	...	...	1,023
Total ...	...	...	...	...	...	...	...	31,444

There were 251 cases of sickness among the immigrants of whom 8 died.

The statement below shows the number of sick labourers treated month by month in the Emigration Hospital at Gauhati during the year 1937 .—

Disease	January	February	March	April	May	June	July	August	September	October	November	December	Total
Abscess ...	1	...	1	...	1	2	...	...	...	...	...	...	5
Anaemia ...	2	...	...	...	...	...	...	...	...	...	...	...	2
Bronchitis ...	2	2	...	...	2	...	...	1	...	...	...	2	9
Chicken-pox ...	2	1	1	1	2	2	...	...	...	...	...	...	9
Cholera ...	2	...	2	3	8	...	2	...	1	...	...	...	18
Colic-Intestinal ...	...	1	1	...	...	1	...	...	...	...	...	...	3
Conjunctivitis, Keratitis ...	6	6	9	15	31	12	7	6	1	1	1	...	95
Diarrhoea ...	...	1	...	3	2	2	...	1	...	2	...	1	12
Dysentery ...	...	...	1	...	...	...	...	...	...	...	...	...	1
Eczema ...	...	...	...	1	...	...	...	...	...	...	...	...	1
Enteric fever ...	...	...	...	...	1	...	...	...	...	...	...	...	1
Influenza ...	2	10	7	...	2	1	2	1	...	...	1	...	26
Malaria ...	5	11	12	10	5	2	7	...	2	1	1	6	62
Measles ...	1	1	7	1	2	...	...	...	...	...	...	...	12
Rickets ...	...	1	...	...	...	...	...	...	...	...	1	...	2
Scabies ...	3	...	...	...	...	...	...	...	...	...	...	...	3
Small-pox ...	...	1	...	1	1	1	...	...	...	...	...	...	4
Skin diseases, Lichen ...	1	4	2	3	...	...	...	...	...	...	...	...	10
Tuberculosis-Intestinal ...	...	...	...	...	1	...	...	...	...	...	...	...	1
Ulcer ...	...	...	...	1	...	...	...	...	...	...	...	...	1
Wounds ...	...	...	...	...	...	2	...	...	...	...	...	...	2
Total ...	27	39	43	39	58	25	18	9	4	4	4	9	279



Three cases *viz.*, one each of small-pox, chickenpox and diarrhoea were treated in the Tezpur Emigration Hospital. This hospital was closed on the 1st June 1937.

18. No new railway construction was undertaken in Assam during the year under report either by the Eastern Bengal or Assam Bengal Railways. There were however three Labour camps, *viz.*, Dittockcherra Ballast and Boulder siding camp at bridge No. 19, and a camp in connection with the remodelling of Badarpur yard. The population of these camps varied from 255 to 1,470. Kutcha huts were provided and their surroundings were reported to be kept in a satisfactory sanitary condition. Malaria however was prevalent in the Dittockcherra camp and the general health of labourers in this camp was not very satisfactory. A Sub-Assistant Surgeon and a Compounder were employed for treatment of illness in this camp. The general health in the other two camps was good.

CHAPTER III

THE STATE OF PUBLIC HEALTH AND THE HISTORY OF THE CHIEF DISEASES

19. The information recorded in the preceding chapter indicates that the state of public health in the province was not satisfactory during the year under report. Deaths under all heads of mortality with the exception of "Injuries", were greater than in 1936. The largest increase in the number of deaths was from "Fevers" followed by "All Other Causes".

During the year 176,054 deaths were recorded 5,440 of which were from cholera, 2,187 from Small-pox, 109,375 from fevers, 12,882 from Dysentery and Diarrhoea, 6,702 from Respiratory Diseases, 1,910 from Injuries and 37,558 from "All Other Causes." The table below shows the death-rates per mille from the chief causes of death during 1937, as compared with the decennium ending 1936:—

Diseases	1927-36			1937		
	Urban	Rural	Combined	Urban	Rural	Combined
1	2	3	4	5	6	7
Cholera ... ..	0·49	0·84	0·83	0·14	0·70	0·69
Small-pox ... ..	0·13	0·25	0·25	0·17	0·28	0·28
Plague ... ..	...	...	...	...	...	...
Fevers ... ..	4·82	12·22	12·02	5·81	14·00	13·80
Dysentery and Diarrhoea	2·19	1·18	1·20	2·59	1·60	1·62
Respiratory Diseases ...	2·29	0·71	0·75	2·43	0·81	0·85
Injuries ... ..	0·55	0·24	0·25	0·55	0·23	0·24
All other causes ...	6·82	4·10	4·16	7·67	4·66	4·74
Total ... ..	17·30	19·52	19·46	19·38	22·28	22·21

The death-rate for the year 1937 was higher than the decennial average by 2·75. A noticeable increase was reported in the number of deaths from "Fevers" (12,135). The increase in the number of deaths from this cause was the principal factor in raising the death-rate as recorded in 1937. Next to "Fevers" an increase of 3,356 deaths was recorded under "All Other Causes".



20. The number of deaths from cholera reported during the year was 5,440 against 3,816 in the previous year. The death-rate per 1,000 of population was 0·69 as compared with 0·48 in 1936. The decennial average was 0·83 as shown in the table below:—

Districts.					Death-rate per mille.	
					1927-36	1937
Cachar	...	...	...	...	0·70	0·57
Sylhet	...	...	...	...	1·24	1·60
Goalpara	...	...	...	...	0·83	0·04
Kamrup	...	...	...	...	0·98	0·35
Darrang	...	...	...	...	0·65	0·28
Nowgong	...	...	...	...	0·43	0·22
Sibsagar	...	...	...	...	0·38	0·07
Lakhimpur	...	...	...	...	0·17	0·04
Total					0·83	0·68

The district of Sylhet suffered most from cholera during the year under report. The death-rate of cholera was highest in this district (1·60); The next highest death-rate was in Cachar (0·57). The lowest death-rate was (0·04) returned from both Goalpara and Nowgong. Deaths from cholera were reported from 97 out of 148 registration circles and from 1,521 out of 28,333 villages in the province. The largest number of deaths occurred in May (1,477) followed by April (1,238). The lowest number of deaths was recorded in October (70). During the year under review 28 deaths from cholera occurred in towns and 5,412 in rural areas. Deaths from cholera were reported from 11 Towns. Gauhati reported the largest number of deaths (7) the next highest number was reported from Habiganj (5). Cholera was most prevalent in Sylhet district. In this district the rural circle of Kamalganj in Sylhet reported the highest death-rate (5·00). The other circles in the district reporting high death-rates were Lakai (4·04), Patherkandi (3·82), Kulaura (3·58) and Sreemangal (3·29).

The amount of cholera vaccine issued in the Province since 1927 is shown below:—

1927	...	...	...	...	419,880 c c s.
1928	...	...	...	...	237,773 „
1929	...	...	...	...	356,047 „
1930	...	...	...	...	220,532 „
1931	...	...	...	...	170,820 „
1932	...	...	...	...	169,317 „
1933	...	...	...	...	451,884 „
1934	...	...	...	...	171,117 „
1935	...	...	...	...	475,955 „
1936	...	...	...	...	368,898 „
1937	...	...	...	...	425,443 „

During the year under review 402,634 doses of bacteriophage were issued. Two temporary Epidemic Units, in addition to five permanent units, were sanctioned during the year making the total to seven units. The seven units each consisting of three Sub-Assistant Surgeons were found inadequate when there is an extensive epidemic, for when such epidemics break out, as they frequently do, in several districts at the same time, affecting extensive areas where communications are not good, it then becomes impossible for the epidemic staff to cover the whole area. In such circumstances there is no other alternative but to close Public Health dispensaries and to utilise the staff for epidemic duty, dislocating the system of treatment of *Kala Azar* which is carried out in these dispensaries. Provision of additional units is therefore imperative. A Chart showing the Provincial mortality from cholera from 1912-1937 is attached (*see* Chart No. II.)

21. In 1937, 220 deaths from cholera were reported from Tea Estates against 194 in the previous year. The corresponding ratios per mille being 0·22 and 0·19 respectively. The largest number of deaths was reported from Sylhet district (112.)

22. During the year 1937, 2,187 deaths from small-pox were reported against 963 in 1936 showing an increase of 1,224 deaths. The death-rate was 0·28 per mille as compared with 0·12 in 1936 and 0·25 the decennial average as noted below:—

Districts.					Death-rate per mille.	
					1927-36	1937
Cachar	...	...	...	...	0·21	0·13
Sylhet	...	...	...	...	0·35	0·66
Goalpara	...	...	...	...	0·41	0·01
Kamrup	...	...	...	...	0·26	0·16
Darrang	...	...	...	...	0·07	0·06
Nowgong	...	...	...	...	0·02	0·21
Sibsagar	...	...	...	...	0·17	0·008
Lakhimpur	...	...	...	...	0·13	0·003
Total					0·25	0·28

In 1937 Small-pox was reported from 748 out of 28,333 villages in the province. Deaths from small-pox were recorded in 74 registration circles out of 148. The largest number of deaths occurred in June (333) and the smallest in August (99). Sylhet with its death-rate (0·66) heads the list followed by Nowgong (0·21). A total of 34 deaths from small-pox was reported from Towns and 2,153 from rural circles. In the year under report 227 children under one year of age and 333 between one and ten years of age died of small-pox as compared with 107 and 111 respectively in the previous year. The remaining deaths (1,627) occurred among adults. A Chart showing the provincial mortality from small-pox from 1912-1937 is attached (*see* Chart No. III).

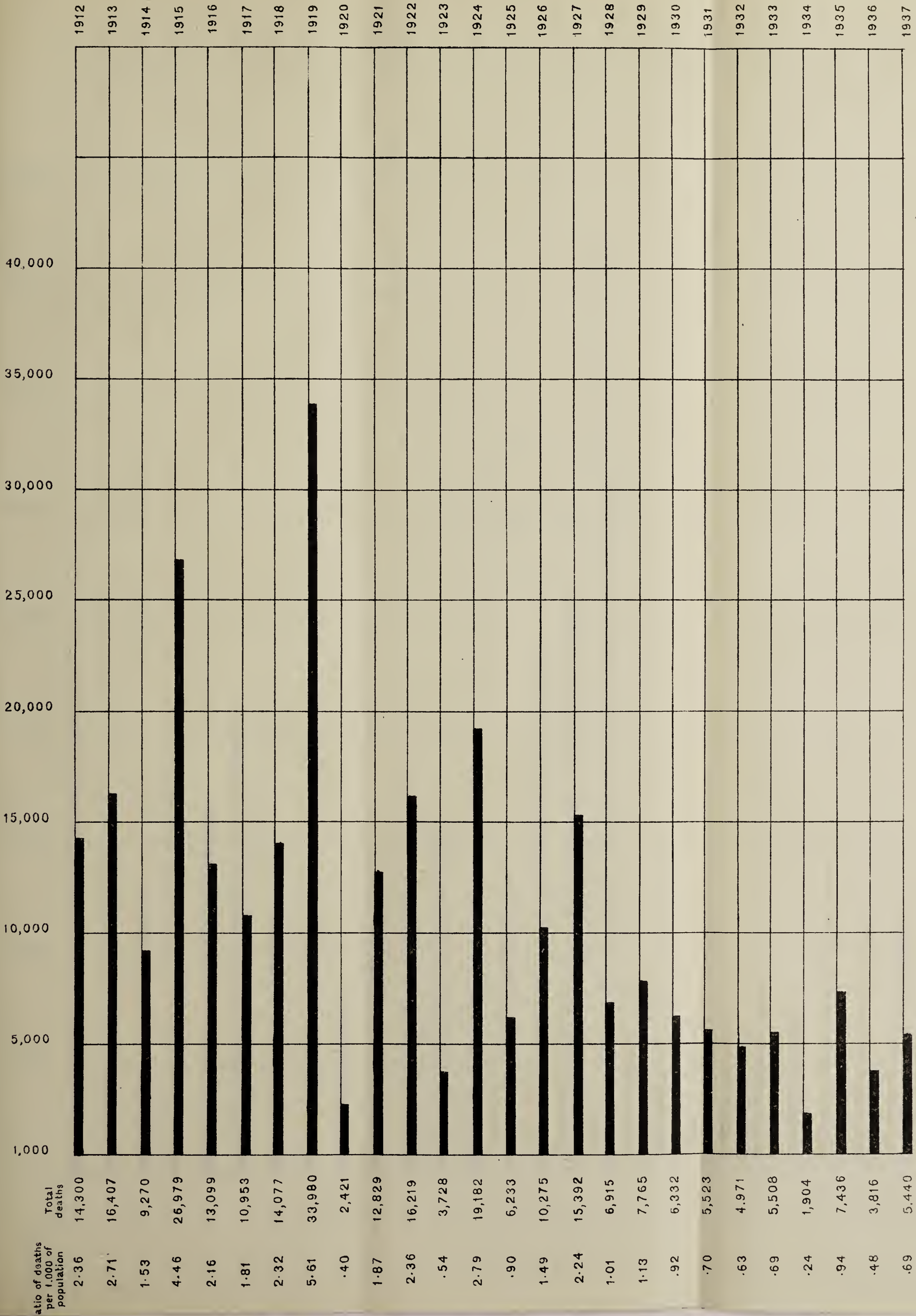
23. Deaths from small-pox were reported from 4 Towns. In Sunamganj, in Sylhet District, the death-rate from small-pox was highest (4·50). The next highest rate was in Karimganj in the same district (1·23). Among rural circles Badarpur in the Sylhet district reported the highest death-rate (6·05), followed by Karimganj (2·54), Kanaighat (2·26), in Sylhet, Dhing (2·00) in Nowgong, Jaldhup (1·59), Madhabpur (1·42), Habiganj (1·41) and Baniachong (1·03) in Sylhet from which it will be observed that the high death-rates of small-pox are practically confined to Sylhet district.

There are no special hospitals in Assam for the isolation and treatment of small-pox cases. Particulars of cases treated in the Infectious Diseases Hospitals where such exist are given in table below which also shows the towns where such Hospitals exist—

	Municipal towns	No. of small-pox patients treated	Vaccinated as evidenced by presence of one or more vaccination cicatrices	Stated to have been successfully vaccinated but no vaccination cicatrices present	Stated to be vaccinated but vaccinated unsuccessfully and no cicatrices present	Previously un-vaccinated but vaccinated during the incubation of small-pox	Stated to have been successfully vaccinated
	1	2	3	4	5	6	7
Dhubri	...	2	2	...	...	...	...
Gauhati	...	4	4	...	...	...	...
Shillong	...	...	...	...	...	...	...
Tezpur	...	...	...	...	...	...	...



CHART NO. II  
Mortality from Cholera in Assam  
from 1912 to 1937



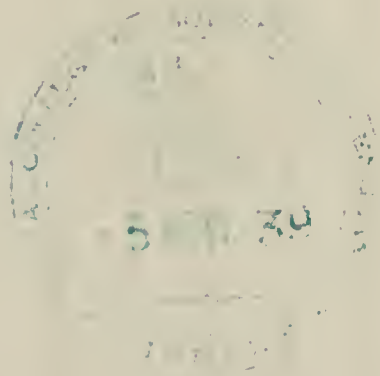
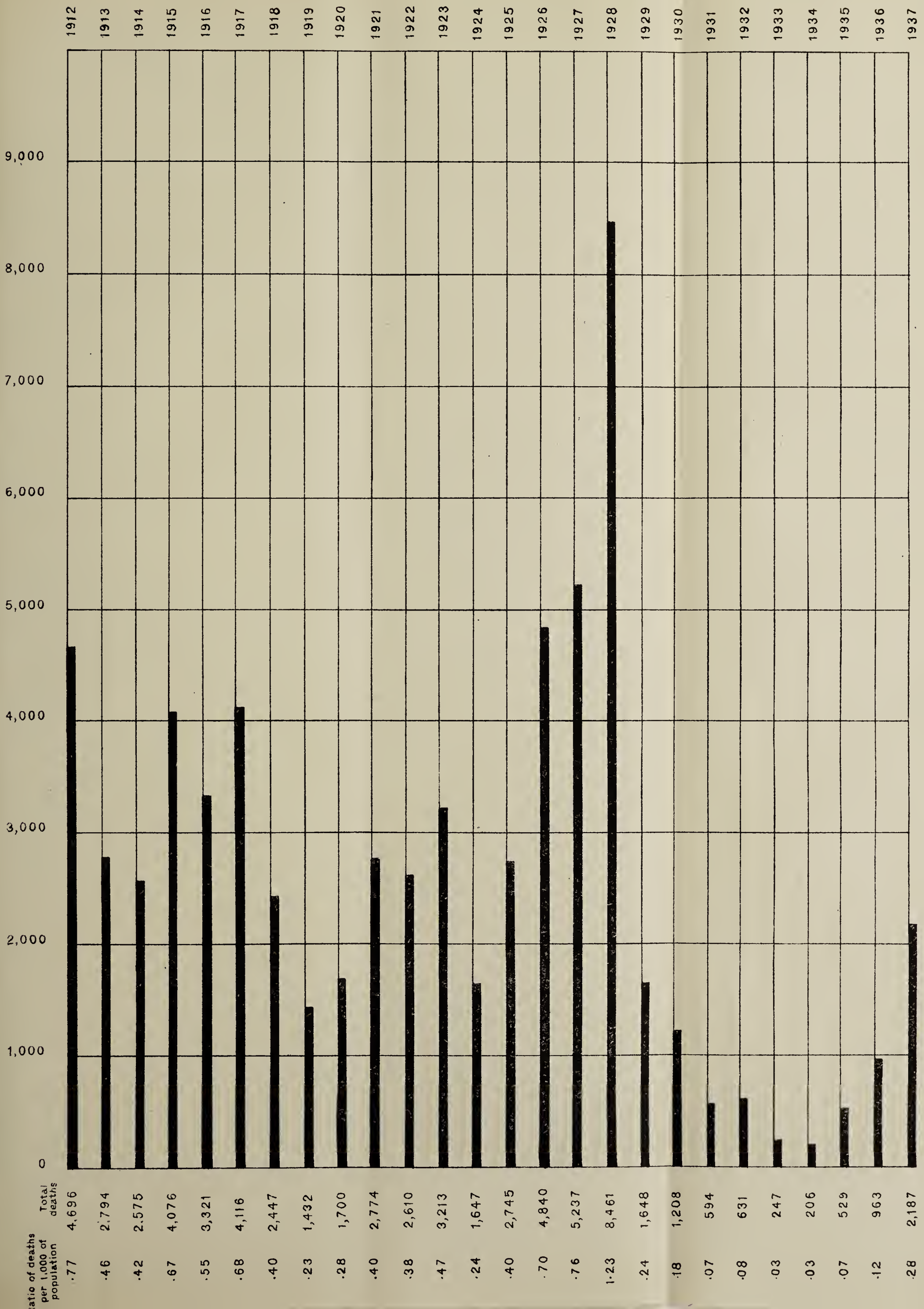




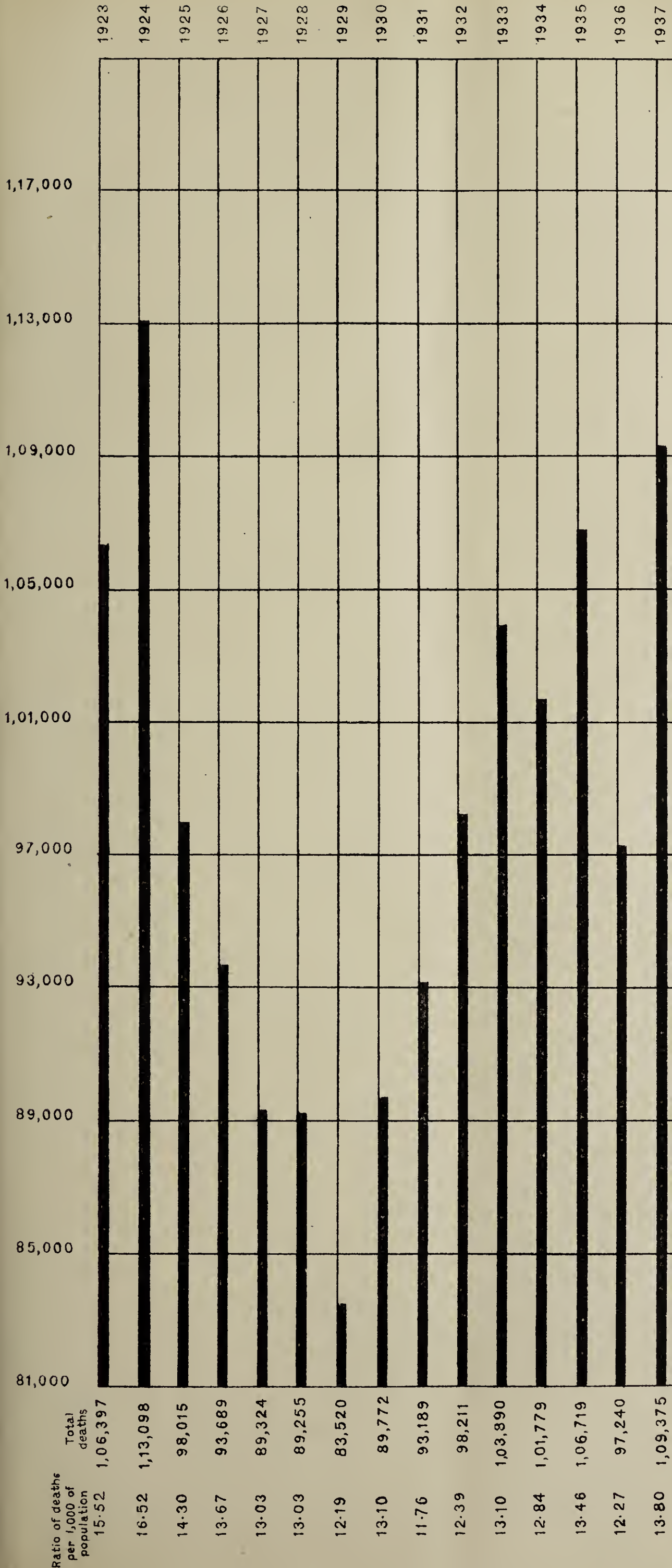
CHART NO. III  
Mortality from Small-pox in Assam  
from 1912 to 1937



20



CHART NO. IV  
Mortality from Fevers in Assam  
from 1923 to 1937







Plague. 24. No case of Plague was reported from any district during the year under review.

25. The total number of deaths reported under the head of "fevers" during the year 1937 was 109,375 against 97,240, in the preceding year, showing an increase of 12,135 over that of the previous year. The death-rate per mille was 13·80 against 12·27 in 1936 and 12·02 during the last decennium as shown in the appended table :—

Districts	Death-rate per mille	
	1927-36	1937
Cachar	11·01	12·79
Sylhet	12·05	14·70
Goalpara	20·70	21·84
Kamrup	9·80	8·88
Darrang	12·85	15·26
Nowgong	9·98	10·52
Sibsagar	9·41	11·85
Lakhimpur	9·34	11·84

Fevers accounted for 62·13 per cent. of the total Provincial mortality against 62·49 in the preceding year. The figures include deaths due to Malaria, *Kala azar* and also deaths from various diseases having fever as their predominant symptom. It is therefore not possible to determine what percentage of total deaths under this head is due to malaria. The largest number of deaths was recorded in June (11,073) and the smallest in March (6,424). The highest mortality rate from fevers was recorded in the district of Goalpara (21·84) and lowest (8·88) in Kamrup.

As in previous years Quinine and Cinchona Febrifuge were distributed free to indigent malaria patients throughout the Province. A Chart showing the Provincial mortality from "Fevers" from 1923 to 1937 is attached (*see* Chart No. IV).

26. Under the head of dysentery and diarrhoea 12,882 deaths were registered during the year 1937 against 11,113 in the preceding year. The death-rate per mille of population was 1·62 as compared with 1·40 in 1936 and 1·20 during the last decennium as shown in the appended table :—

Districts	Death-rate per mille	
	1927-36	1937
Cachar	2·06	2·14
Sylhet	1·11	1·55
Goalpara	0·24	0·16
Kamrup	1·53	0·48
Darrang	1·55	2·06
Nowgong	0·56	0·92
Sibsagar	2·10	2·97
Lakhimpur	2·04	3·33
Total	1·20	1·62

The highest number of deaths was recorded in September (1,442) and the lowest in February (620). The highest mortality rate was reported from the Lakhimpur district (3·33) followed by Sibhsagar (2·97). The lowest rate was returned from Goalpara (0·16).

27. The total mortality from Respiratory diseases during the year under review was 6,702 against 6,425 in 1936. The corresponding death-rates for the two years were 0·85 and 0·81 respectively. The quinquennial average was 0·77. The highest mortality was recorded in December (657) and the lowest in February (471). The highest mortality was recorded in the district of Lakhimpur (2·34) as in previous years followed by Cachar (1·68). The lowest rate was returned from Goalpara district (0·12).

28. Influenza occurred in sporadic form during the year. The mortality from Influenza is included under "Fevers". The total number of deaths from this disease during 1937, was 481 against 62 in 1936. The death-rates per mille of population were 0·06 and 0·007, respectively.

29. During the year under report, 1,910 deaths from "Injuries" and 37,558 deaths from "Other Causes" were registered, as compared with 2,042 and 34,002 respectively in the preceding year. The death-rates per mille of population were 0·24 and 4·74 respectively in 1937 against 0·26 and 4·29 in the preceding year.

Injuries and Other Causes.

There were 85 deaths from Typhoid Fever reported from 14 Towns during the year under report, *viz.*, Nowgong (14), Karimganj (12); Dibrugarh (9); Gauhati (8); Barpeta (7); Sylhet (6); Habiganj (5); Sibsagar (5); Silchar (5); Tezpur (5); Dhubri (4); Jorhat (3); Goalpara (1); Hailakandi (1).

Typhoid Fever.

During the year 228 deaths from Cerebrospinal Fever were reported from 4 districts, *viz.*, Manipur State (218), Sibsagar (4), Naga Hills (4), Cachar (2) and from which it will be seen Manipur State was the worst sufferer. It is also from this State that the infection in the Naga Hills is said to have been derived.

Cerebrospinal Fever.

30. During the year under report four cases of Beri-Beri were reported from Habiganj town. The cases were treated by the Sub-Assistant Surgeon, Habiganj dispensary. The source of infection could not be traced.

Beri-Beri.

31. A total of 2,607 cases of Yaws was treated during 1937 as compared with 3,496 cases treated in the preceding year. In each of the districts of Kamrup and Nowgong the treatment of Yaws was taken up in two more centres in addition to the other work done in these dispensaries. In Nowgong district 3 Sub-Assistant Surgeons received training in the diagnosis and treatment of Yaws. In Goalpara district 5 new centres were opened making the total number of centres 15. The treatment with Neosalvarsan has proved efficacious.

Yaws.

32. A total of 8,965 cases of Minor Eye Complaints were treated in 1937 by the Public Health Department dispensaries as compared with 7,896 cases in the previous year.

Minor Eye Complaints.

33. During the year under report 73 cases of Naga sore were treated in the Kamrup district.

Naga sore.

34. The table below shows the number of deaths from *Kala azar* from 1927 to 1937 :—

Kala azar.

Districts	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
1	2	3	4	5	6	7	8	9	10	11	12
Cachar ...	12	2	3	2	4	4	2	6	7	2	4
Sylhet ...	798	482	429	74	246	296	146	227	260	173	207
Goalpara ...	226	166	135	112	121	122	92	61	100	84	135
Kamrup ...	475	241	180	102	160	152	129	151	176	61	77
Darrang ...	318	258	241	185	222	155	167	136	91	155	256
Nowgong ...	528	260	178	132	129	132	110	78	52	121	196
Sibsagar ...	143	86	87	58	71	78	64	84	101	99	126
Lakhimpur ...	5	5	1	2	...	2	4	...	...	...	...
Khasi and Jaintia Hills.	3	4	...	...	...	...	...	4	...	10	5
Naga Hills ...	...	...	1	1	...	1	1	...	...	...	...
Lushai Hills ...	...	1	...	...	...	1	...	...	...	...	...
Garo Hills ...	350	154	149	84	64	43	34	23	58	47	51
Sadiya Frontier Tract.	1	1	1	...	...	1	...	...	...	1	...
Manipur State ...	...	...	...	1	...	...	...	...	...	...	...
Total ...	2,859	1,660	1,405	953	1,017	987	749	770	845	753	1,057



The number of *Kala azar* cases treated from 1927 to 1937 are shown in the appended table :—

Districts	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
1	2	3	4	5	6	7	8	9	10	11	12
Cachar ..	359	394	470	376	370	391	472	529	478	574	445
Sylhet ..	10,527	8,988	9,162	6,726	5,512	4,719	4,210	4,612	3,869	3,645	3,672
Goalpara ..	3,495	2,316	2,389	1,439	992	1,089	1,159	1,107	1,245	1,276	2,046
Kamrup ..	6,445	3,577	2,598	1,814	1,690	2,061	2,223	2,197	1,465	1,309	918
Darrang ..	4,053	2,228	1,399	1,106	942	665	757	876	738	636	514
Nowgong ..	5,008	2,614	2,433	1,440	1,057	1,075	1,663	1,726	1,651	1,471	2,317
Sibsagar ..	1,521	1,555	2,387	1,495	1,095	1,269	1,251	1,372	938	864	1,396
Lakhimpur ..	19	28	23	23	3	12	13	18	12	6	2
Khasi & Jaintia Hills.	120	6	..	..	..	..	1	5	..	..	..
Naga Hills ..	1	5	9	21	5	16	12	14	7	5	15
Lushai Hills..	..	1	..	..	4	2	1	..	..	..	..
Garo Hills ..	1,828	1,690	2,905	1,905	882	605	850	927	690	793	717
Sadiya Frontier Tract.	3	8	3	2	2	1	2	1	..	..	2
Manipur State	36	166	35	83	38	53	36	14	7	8	7
Total ..	33,415	23,576	23,804	16,430	12,592	11,958	12,650	13,398	11,100	10,587	12,051

The number of deaths from *Kala azar* during the year 1937 was larger by 304 than that of 1936. The number of patients treated was also larger by 1,464. The increase both of deaths and cases treated is shared by Sylhet, Goalpara, Nowgong and Sibsaagar districts. The method of diagnosis and treatment of *Kala azar* continued to be the same as in previous years. Special attention continues to be given to intensive and detailed surveys in all districts in order to detect fresh cases and bring them under treatment as early as possible. A Sub-Assistant Surgeon was deputed to Cachar district specially for *Kala azar* survey duty. The Sub-Assistant Surgeons in charge of hospitals and dispensaries also surveyed 514 villages during 1937.

In Goalpara district special surveys in the Khormuza and Basugaon areas brought to light a good number of cases and Public Health Department dispensaries were opened in these two places.

In Kamrup district, a Public Health Department dispensary was started at Dhupguri with an out-centre at Bandapara and the Khudnabari Public Health Department dispensary was converted into an out-centre of the Barpeta Public Health Department dispensary.

In Darrang district, Rangamati, Borchilajhar, Chillabandha, Borbhogia, Borchola, Goraimari and Mahabhairab areas were thoroughly surveyed. The Bengbari Public Health Department dispensary was closed during the year.

In Nowgong district, vigorous surveys and resurveys were carried out to detect even the early cases of *Kala azar*. As a result of these surveys five new sub-centres and a dispensary at Mayang were opened. The Kuturi Public Health Department dispensary was closed during the year.

In Sylhet district, villages within dispensary areas were surveyed by the Medical Officers in charge of the dispensaries and the Public Health Department Sub-Assistant Surgeons were specially deputed to survey other areas where a recrudescence of *Kala azar* was suspected or where Public Health Department dispensaries do not exist. A new Public Health Department dispensary was opened at Govindanagar in Sunamganj subdivision during the year.



In Sibsagar district, 147 villages were surveyed. *Kala azar* is reported to be showing signs of increase in this district specially in Silakuti, Nazira, Dhopabar, Dopdar, Hologuri, Bokota, Kowarpur and Hailchara mauzas. Three *Kala azar* centres have since been opened and there is a proposal to start a *Kala azar* Ward in the Golaghat hospital.

In the Garo Hills district a treatment centre was opened at Kalaichar during the year under report.

35. A total of 4,692 lepers came under treatment in Leper Asylums and other centres of treatment under the Medical and Public Health Departments ; of these, 911 lepers were treated in leper asylums, wards and colonies. In the Medical Department dispensaries 1,916 out-patients lepers received treatment. The Public Health Department dispensaries treated 1,865 lepers during 1937, in Sylhet 852, in Goalpara 47, in Kamrup 343, in Darrang 301, in Nowgong 310, and in Sibsagar 12. The number of outdoor clinics in the Public Health Department for the treatment of leprosy during the year was 68 against 62 in the preceding year. Sub-Assistant Surgeons of the Public Health Department undertake leprosy surveys in conjunction with *Kala azar* surveys. No special leprosy survey was undertaken during the year. Assistant Surgeons of the Public Health Department carry on propaganda work with the aid of Magic lantern slides as usual.

## CHAPTRR IV

### EPIDEMIOLOGY

36. The number of deaths from cholera during the last 10 years was as follows :—

1927	...	...	...	...	...	15,392
1928	...	...	...	...	...	6,915
1929	...	...	...	...	...	7,765
1930	...	...	...	...	...	6,332
1931	...	...	...	...	...	5,523
1932	...	...	...	...	...	4,971
1933	...	...	...	...	...	5,508
1934	...	...	...	...	...	1,904
1935	...	...	...	...	...	7,436
1936	...	...	...	...	...	3,816
1937	...	...	...	...	...	5,440

The increase of cholera mortality in 1937 was due to an increase of the disease in the district of Sylhet. In this district 4,371 persons died from cholera against 2,047 in the preceding year. At first the outbreak was of a sporadic nature but later it assumed an epidemic form owing to the scarcity of drinking water. Delay in reporting the outbreaks also helped in permitting the outbreak to become widespread. In other districts only sporadic cases occurred.

## CHAPTER V

### FAIRS AND FESTIVALS

37. In the Cachar district.—Two fairs—Sidheswar and Bhuvan Hill Melas—were held as usual during the year. The former which lasted for a fortnight was attended by 10,000 people. The latter lasted for 3 days and 4,500 people attended. Both the melas were attended by a Sub-Assistant Surgeon of the Public Health Department and two disinfectant carriers. The sanitary arrangements were satisfactory in both the melas.

In the Goalpara district.—A large gathering of pilgrims took place at Dhubri for a day for the Brahmaputra *snan* (Bathing festival) on the *Astami* day. Between 6,000 to 8,000 people were present. Suitable sanitary arrangements were made by the Dhubri Municipal Board. A Medical camp was stationed in the *mela* ground and the Health Officer was detailed to look after sanitary arrangements and to render medical aid if necessary. Temporary latrines were constructed and arrangements were made for the supply of piped water for the whole day.



In the Kamrup district.—The Daranga *mela* was held as usual, during the year. There was no outbreak of any epidemic disease.

There was also a huge gathering of pilgrims at the Kamakhya Hills on the occasion of the Hindu Festival “Ambubachi” in the same district. A Sub-Assistant Surgeon of the Public Health Department with two disinfectant carriers was deputed to render medical aid. There was no outbreak of any epidemic.

In the Sadiya Frontier Tract.—There was a pilgrimage at Parsuram Kunda on the 13th and 14th January 1937.

In the Nowgong district.—The annual *Astami snan* was held at Silghat where between 5,000 to 7,000 people were present. A Sub-Assistant Surgeon was deputed to render medical aid. The Civil Surgeon, Nowgong, also was present and looked to the Sanitary arrangements.

## CHAPTER VI

### URBAN SANITATION

(Including notified areas)

#### MUNICIPAL WATER SUPPLIES

38. There were 17 Municipal Boards and 10 Town Committees in the Province as in the previous year. Their total income was Rs.12,84,175 in 1937 against Rs. 13,05,395 in 1936. A sum of Rs.5,77,212 or 45·25 per cent. of the total income was spent on sanitary works, original and recurring, as compared with Rs.5,88,820 or 45·10 per cent. in the preceding year.

As usual, the Director and Assistant Directors of Public Health inspected the Municipalities and Small Towns and offered advice on health matters. As pointed out in inspection notes, much still remains to be done in every direction in the matter of improving sanitary conditions under these local authorities.

The Public Works Department incurred a total expenditure of Rs.9,676-2-0 on the maintenance of water supplies, drainage and town improvement as compared with Rs.4,191 in the preceding year.

## CHAPTER VII

### RURAL SANITATION

39. A sum of Rs. 1,61,160 was spent by the Local Boards on Public Health measures during the year 1937 against Rs. 1,78,719 in the preceding year.

About 97 per cent. of the population of Assam lives in rural areas, consequently the health and prosperity of the people of these areas is a matter of vital importance. Local Boards should pay special attention to the provision of adequate and safe water supplies for villages. Until this is done no material reduction in the incidence of water-borne disease can be expected. The Public Health measures which are extensively carried out in rural areas are protection against cholera by inoculation, the use of bacteriophage in the treatment of cholera cases and protection against small-pox by vaccination. *Kala azar* treatment measures continue to be carried out on the lines similar to those employed hitherto. Tablets of Quinine Reinforced Cinchona Febrifuge for the treatment of Malaria are sold in all village post offices and through other accredited agents. Quinine and Cinchona Febrifuge are also supplied free to indigent persons in all districts. Treatment of Yaws, Leprosy, Malaria, Influenza, Minor Eye Complaints, Dysentery and Diarrhoea is also undertaken by Public Health Department dispensaries in the rural areas. Adulteration of food-stuffs is reported to be increasing in the Province. This may be controlled by more strict supervision, by regular inspection and submission of samples to the Public Analyst for analysis, and inflicting of adequate punishment in all cases where food unfit for consumption is sold, and where adulteration of articles of food is reported by the Analyst. It is hoped that Local Boards will take more active and deterrent action to prevent adulteration than appears to be the case at present.



## CHAPTER VIII

40. Malaria Fever is the most widespread disease in the Province. It is prevalent throughout the Province and almost constantly in epidemic form. A total of 819,845 cases of Malaria were treated in all hospitals and dispensaries in the plains districts; 716,192 cases were treated in dispensaries under the Medical Department and 103,653 cases in the Public Health Department dispensaries. Separate figures of mortality from Malaria are not available. As noted in paragraph 25, deaths from "Fevers" amounted to 109,375 against 97,240 in the preceding year. A very large percentage of these deaths must be attributable to Malaria Fever. Quinine Reinforced Cinchona Febrifuge was used as a general preventive and curative agent against the disease and was sold to the public at two annas per tube containing ten tablets of four grains each. As in previous years the Government of Assam gave a grant of Rs. 20,000 to the Assam Medical Research Society for purposes of research. The Society's activities are at present confined mainly to researches on Malaria.

These activities are summarised in the following report supplied by the Research Officer—Dr. E. Milford Rice, M.D., D.T.M. & H., F.R.E.S.

"Training Class.—The annual eight weeks' course in malariology was held from 19th July to 18th September and was attended by 13 qualified medical men and one man who had previously received training in malariology. Of these, five were from the Public Health Department, five from Tea Estates and four private nominees. Eleven candidates passed the examination set at the end of the course.

"Malaria Surveys.—One new survey of a large *bil* area in Doom-Dooma, adjacent to tea estates and a populous town previously surveyed has been undertaken during the year in order to determine the limitations of application of control measures.

"Four tea estate surveys were completed during the year and recommendations for control measures submitted.

"Treatment Schemes.—In the Doom Dooma Cinchona Plasmoquine Treatment Centre the following Tables shows the results so far obtained.

"October-November-December

Year	Spleen			Parasite		
	Number Examined	Number Enlarged	Spleen Rate	Number Examined	Number with Parasites	Parasite Rate
1932 ...	253	143	56.5	277	113	40.7
1933 ...	195	106	54.3	195	34	17.4
1934 ...	178	27	14.6	178	12	6.7
1935 ...	359	48	14.1	339	49	14.4
1936 ...	263	55	20.9	263	108	41.0
1937 ...	466	68	14.6	466	63	13.5

"The parasite rate shown for 1936 suggests that during a year of exceptionally high endemicity, infections are still being readily acquired in spite of the treatment given. The spleen rate however, during 1936, remained comparatively low.

"Four groups of villages, *viz.*, Puranigudam in Nowgong, Bhagabazar in Cachar, Tambulpur in Kamrup and Damra in Goalpara were selected for treatment of all Malaria cases with Reinforced Cinchona Febrifuge where parasites were demonstrable on blood examination. The village treatment schemes were financed jointly by the Local Board concerned and the Government of Assam. Data collected on the efficacy of the treatment schemes will be presented.

"Entomological.—Routine examinations carried out between 1st January and 30th September have included the identification of 103,284 anopheline larvae and 4,844 adults.

"Blood Examinations.—Upto September 30th, 6,378 blood specimens have been examined and 2,784 or 43.7 per cent. were found positive for Malaria parasites. These are from hyper-endemic areas.



“Experimental Malaria Control.—In the two groups of villages selected for experimental cold weather and pre-monsoon antilarval control, it is still too early to give a significant evaluation of the efficacy or otherwise of the methods applied. “The following table, however, gives the results so far observed among the child population (age 2—10 years) and the subsequent findings next year will give us further information.

“*Dishpur Group (Brahmaputra Valley)—November-December*

Year	Number Examined	Parasites present	Parasite Rate	Splenic Enlargement	Spleen Rate
1935 ... ..	192	105	54·6	146	76·5
1936 ... ..	229	61	26·6	99	43·2
1937 ... ..	Examinations not yet completed.				

“*Jagadishpur Group—Surma Valley)*

1935 ... ..	377	151	40·1	181	48·0
1936 ... ..	496	74	14·9	67	13·5
1937 ... ..	504	53	10·9	45	8·9

“In the four town areas presenting differing Malaria intensity which were previously selected for experimental antilarval control, work was continued during the year. As in the case of the village experiments, it is still too early to give an accurate evaluation of the efficacy of the methods applied but the Tables give an indication of the results so far recorded among the population.

“*October-November-December*

Town	Year	Spleen Index		Per cent. Enlarged	Parasite Index	
		Number Examined	Number Enlarged		Number Positive	Per cent. Positive
Mangaldai ...	1934*	548	238	43·4	153	27·9
	1935	783	199	25·4	105	13·4
	1936	766	85	11·1	64	8·4
	1937	942	27	2·9	56	5·9

“At Mangaldai, which we have classified as Group C, antilarval activities have been carried out in two large streams from mid-January until monsoon flushing takes place, *i. e.*, approximately 15th June.

“In two old river beds, where flushing does not occur, antilarval work has had to be carried out throughout the entire year.

Town	Year	Spleen Index		Per cent. Enlarged	Parasite Index	
		Number Examined	Number Enlarged		Number Positive	Per cent. Positive
Gauhati ...	1934*	1,304	288	22·1	279	21·4
	1935	1,105	146	13·2	82	7·4
	1936	1,145	82	7·2	132	11·5
	1937	Examinations not yet completed				

“\*1934 data not strictly comparable to those of 1935-36 as they include findings made also during August and September as well as those in October, November and December.

“In Gauhati, classified in Group B, antilarval work is carried out between mid-January until monsoon flushing takes place, except for several hill-side seepages where control has had to be carried out also during the monsoon as these areas are not capable of being flushed by nature.

Town	Year	Spleen Index			Parasite Index	
		Number Examined	Number Enlarged	Per cent. Enlarged	Number Positive	Per cent. Positive
North Lakhimpur	1934*	328	54	16.4	114	36.3
	1935	403	128	31.7	77	19.1
	1936	435	100	23.0	45	10.3
	1937	Examination not yet completed				

“At North Lakhimpur, classified in Group B, antilarval control has been carried out from mid-January until monsoon flushing of the streams takes place.

Town	Year	Spleen Index			Parasite Index	
		Number Examined	Number Enlarged	Per cent. Enlarged	Number Positive	Per cent. Positive
Nowgong	1934*	712	273	38.3	137	19.1
	1935	985	453	46.0	283	28.7
	1936	1,323	311	23.5	265	20.0
	1937	1,325	132	10.0	63**	5.2**

“Nowgong, classified as Group B, has presented great difficulty because of the large area of the River Kalang to be treated. During that period when the river level is low, *i. e.*, from December to mid-June, there are very large areas, where vegetation, growing up from the river bed, forms suitable breeding places for the vector species. Until we can surmount this problem by some cheap method it is feared that antilarval control with paris green will not give results in keeping with the expenditure necessary.

“Researches.—Experiments on the efficacy of Pyroicide 20 as an insecticide were carried out by using Pyroicide 20 in Kerosine in dilutions of 1-40, 1-35, 1-30, 1-25 and 1-20 in rooms of 1,500 cubic feet capacity using 3/4 oz. of the dilution per experiment. Five experiments were made with each dilution where 100 adult anophelines (*A. maculatus* and *A. annularis*) were liberated prior to spraying with the diluted Pyroicide 20. Results were tabulated 20 minutes after exposure to the vapour in terms of numbers of anophelines dead and numbers stupefied. To determine whether those only stupefied after 20 minutes exposure would recover, they were examined again after 24 hours when, without exception, they were found to have died. The table gives the average results for five experiments with each dilution :—

Dilution	Number Anophelines exposed	Average number per 100 dead in 20 minutes	Average number per 100 stupefied in 20 minutes	Per cent. of efficacy
1-40	100 × 5	36	43	79
1-35	100 × 5	50	37	87
1-30	100 × 5	56	37	93
1-25	100 × 5	55	38	93
1-20	100 × 5	58	37	95

“\*1934 data not strictly comparable to those of 1935-36 as they include findings made also during August and September as well as those in October, November and December.

“\*\*Parasite Index—Nowgong—1214—blood slides examined.



“Provincial Malaria Control.—In co-operation with the Public Health Department and the Provincial Advisory Malaria Committee, supervision and recommendations have been given in nineteen antilarval and five treatment schemes where surveys have been completed by the Society (see below).

“Supervision and recommendations have also been given to seven Tea Estates, *viz.*, Poloi, Bokpara, Budla-Beta, Hokonguri, Sookerating, Longsoal and Kooke-song where complete surveys have been made by the Society and antilarval control has been commenced.”

A lump provision of Rs.24,459 was made by Government for the purpose of carrying out anti-malaria measures in the Province. The Provincial Advisory Malaria Committee held two meetings in the year to consider the relative merits of the schemes proposed and to allot funds. Anti-malarial measures were carried out in the following areas :—

*Cachar*.—Haflong, Maibong bazar and Hailakandi.

*Sylhet*.—Haripur, Jaintiapur, Longai and Jagadishpur.

*Goalpara*.—Kachugaon, Haltugaon, Gauripur, Damra and Dhubri.

*Kamrup*.—Gauhati, Dishpur and Tambalpur.

*Darrang*.—Mangaldai, Tangla, Charduar, Lokra and Tezpur.

*Nowgong*.—Nowgong, Lumding and Puranigudam.

*Sibsagar*.—Jorhat.

*Lakhimpur*.—Doom Dooma and North Lakhimpur.

*Khasi and Jaintia Hills*.—Shillong and Nongpoh.

*Naga Hills*.—Dimapur.

*Sadiya Frontier Tract*.—Pasighat.

#### SALE OF QUININE

41. The table below shows the quantities of Quinine sold, district by district, during the year 1937 :—

Districts	Treatment parcels sold in—		Difference	
	1936	1937	Increase	Decrease
1	2	3	4	5
Cachar ... ..	376	478	102	...
Sylhet ... ..	2,118	2,169	51	...
Goalpara ... ..	822	653	...	169
Kamrup ... ..	1,340	1,241	...	99
Darrang ... ..	542	637	95	...
Nowgong ... ..	764	775	11	...
Sibsagar ... ..	1,009	1,217	208	...
Lakhimpur ... ..	296	369	73	...
Khasi and Jaintia Hills ... ..	614	611	...	3
Naga Hills ... ..	75	96	21	...
Lushai Hills ... ..	1,100	1,386	286	...
Garro Hills ... ..	122	42	...	80
Sadiya Frontier Tract ... ..	86	75	...	11
Manipur ... ..	14	3	...	11
Total ... ..	9,278	9,752	474	...

During the year under report 9,752 parcels of Quinine Reinforced Cinchona Febrifuge were sold against 9,278 in the preceding year, showing an increase of 474 parcels. The sale increased in all districts except Goalpara, Kamrup, Khasi and Jaintia Hills, Garo Hills and Manipur State. The drug was sold at two annas per treatment of 10 tablets each. As in previous years, the following quantities of Quinine and Cinchona Febrifuge were obtained and allotted to Civil Surgeons for free distribution to indigent malaria patients in the badly affected areas of the undernoted plains districts :—

					Quinine Sulph.	Cinchona Febrifuge
Cachar	...	...	...	...	12 lbs.	... 18 lbs.
Sylhet	...	...	...	...	40 „	... 60 „
Goalpara	...	...	...	...	10 „	... 15 „
Kumrup	...	...	...	...	20 „	... 30 „
Darrang	...	...	...	...	10 „	... 15 „
Nowgong	...	...	...	...	16 „	... 24 „
Sibsagar	...	...	...	...	28 „	... 42 „
Total	...	...	...	...	<u>136 „</u>	<u>... 204 „</u>

Out of the Government of India's free gift of 4,500 lbs. of Quinine, 3,000 lbs. were distributed in previous 2 years, 1,500 lbs. were distributed as follows during the year 1937 :—

Cachar	...	...	...	...	...	...	90 lbs.
Sylhet	...	...	...	...	...	...	510 „
Goalpara	...	...	...	...	...	...	135 „
Kamrup	...	...	...	...	...	...	171 „
Darrang	...	...	...	...	...	...	120 „
Nowgong	...	...	...	...	...	...	144 „
Sibsagar	...	...	...	...	...	...	120 „
Lakhimpur	...	...	...	...	...	...	60 „
Garo Hills	...	...	...	...	...	...	54 „
Khasi and Jaintia Hills	...	...	...	...	...	...	30 „
Naga Hills	...	...	...	...	...	...	30 „
Lushai Hills	...	...	...	...	...	...	36 „
Total	...	...	...	...	...	...	<u>1,500 „</u>

A statement showing separately quantities in lbs. of (a) quinine and (b) secondary alkaloids of Cinchona distributed free or at reduced price by the Public Health and Medical Departments and other sources during 1937 is appended :—



[illegible]

42. During the year under report the Juarmal Tusnial Maternity and Child Welfare Centre with hostel for accommodation of 12 women for the Dai training class was opened at Sylhet. Maternity Wards were opened at Sunamganj and Maulvibazar during the year. A maternity ward with 14 beds, operation room and sanitary annexe etc., are also under construction at Karimganj.

A total of 39,727 infants died during 1937 giving an infant mortality rate of 160·94. This large number of deaths amounting to nearly 109 infants per day can be reduced if more maternity and child welfare centres are opened throughout the Province and a larger number of properly trained midwives is made available. The maternity and infant mortality rates recorded in rural areas were 15·13 and 161·13 and those in urban areas were 19·34 and 120·95 respectively. The maternal mortality for the whole province is 15·24. The number of deaths from child birth is collected through Chaukidars and Gaonburas. Beyond the usual verification of vital statistics no special enquiries have been made to verify and check these statistics. The death-rate of children under 5 years was 71·95. The high infant mortality rate is due to lack of knowledge regarding maternity and child welfare. The child welfare and maternity organisation is in the hands of the Red Cross Society. No portion of the Public Health Department's budget was allocated to maternity and child welfare. There was no specialised work for women and children in industrial areas. The number of beds during the year was 47. The Nari Sikshasram training class at Silchar provides a course lasting for a year to a class of 15 students. The course is in accordance with the syllabus of the Victoria Memorial Scholarship Fund. Facilities for the training of Dais exist in the towns of Sylhet, Karimganj, Goalpara and Dhubri. Midwives are not registered in the Province and there is no provision for inspection of midwives. There is no bye-law in any Municipality for controlling the practice of midwives. Salaried midwives are employed by municipalities and local boards. The position in regard to midwifery is improving in the province. Propaganda and health instruction is necessary for the advancement of child welfare and maternity work. The chief hindrances to the advancement of this work are ignorance, poverty and prejudice on the part of the bulk of the population.

Table showing Maternity and Child Welfare centres, health visitors and midwives in rural and urban areas in Assam during 1937 :—

[illegible]



TABLE SHOWING HEALTH SERVICES IN RURAL AND URBAN AREAS IN ASSAM DURING 1937

Rural areas										Urban areas											
Districts	Medical Officer of Health				Epidemic staff	Sanitary Inspectors	Vaccinators		School Medical officers	Other health staff	Medical Officers of Health				Sanitary Inspectors	Vaccinators		Inspector of vaccination and Sub-Inspector of vaccination	School Medical officers	Other staff	
	Holding D. P. H.		Licentiates (L. P. H. S.)				Whole time	Part time			Male	Female	Whole time	Part time		Male	Female				
	Whole time	Part time	Whole time	Part time																	Whole time
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
Cachar ..	..	..	..	..	2 S. A. S.s 4 D. C.s	..	30	..	..	..	..	..	..	..	1	1	..	I. V.—1 S. I. V.—2	3	..	One Sub-Assistant Surgeon employed on Public Health duty.
Sylhet ..	..	..	..	..	7 S. A. S.s 14 D. C.s	..	103	1	..	..	..	..	..	..	3	3	..	I. V.—1 S. I. V.—3	9	..	One Assistant Surgeon and 35 Sub-Assistant Surgeons employed on Public Health duty.
Khasi and Jaintia Hills	..	..	..	..	..	..	8	..	..	..	1	..	..	..	2	1	..	I. V.—1 S. I. V.—1	2	..	One Assistant Surgeon at Public Health Laboratory, 1 Bio-Chemist and 1 Sub-Assistant Surgeon at Vaccine Depot.
Naga Hills ..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	2	..	S. I. V.—1	..	..	....
Lushai Hills	..	..	..	..	..	..	8	..	..	..	..	..	..	..	..	..	..	S. I. V.—1	..	..	....
Goalpara ..	..	..	..	..	3 S. A. S.s 6 D. C.s	..	44	..	..	..	..	..	..	..	1	3	..	I. V.—1 S. I. V.—4	5	..	One Assistant Surgeon and 5 Sub-Assistant Surgeons on Public Health duty.
Kamrup ..	..	..	..	..	2 S. A. S.s 4 D. C.s	..	54	..	..	..	..	..	..	..	1	4	..	I. V.—1 S. I. V.—3	4	..	One Assistant Surgeon and 12 Sub-Assistant Surgeons on Public Health duty.
Darrang ..	..	..	..	..	2 S. A. S.s 4 D. C.s	..	41	..	..	..	..	..	..	..	1	2	..	I. V.—1 S. I. V.—2	3	..	One Assistant Surgeon and 4 Sub-Assistant Surgeons on Public Health duty.
Nowgong ..	..	..	..	..	1 S. A. S. 2 D. C.s	..	26	..	..	..	..	..	..	..	1	1	..	S. I. V.—1 S. I. V.—1	2	..	One Assistant Surgeon and 12 Sub-Assistant Surgeons on Public Health duty.
Sibsagar ..	..	..	..	..	3 S. A. S.s 6 D. C.s	..	45	..	..	..	..	..	..	..	1	4	..	I. V.—1 S. I. V.—3	4	..	One Assistant Surgeon and 6 Sub-Assistant Surgeons on Public Health duty.
Lakhimpur...	..	..	..	..	1 S. A. S. 2 D. C.s	..	32	..	..	..	..	..	..	..	1	4	..	I. V.—1 S. I. V.—2	3	..	....
Garo Hills ..	..	..	..	..	..	..	7	..	..	..	..	..	..	..	..	..	..	S. I. V.—1	..	..	Five Sub-Assistant Surgeons employed on Public Health duty.
Manipur ..	..	..	..	..	..	..	9	..	..	..	..	..	..	..	..	3	..	S. I. V.—2	..	..	....
Sadiya Frontier Tract	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	2	..	S. I. V.—1	..	..	....
Balipara Frontier Tract	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	....

D. C. = Disinfectant Carrier.

## CHAPTER X

## SCHOOL HYGIENE AND MEDICAL INSPECTION OF SCHOOL CHILDREN

43. During the year under report Assistant Directors of Public Health gave the usual attention to the hygienic conditions of schools. Periodical medical inspections of selected institutions were carried out and recommendations made for the improvement of health of pupils and general sanitation of the schools and hostels attached thereto by the Medical Officers in charge.

## CHAPTER XI

## HEALTH PROPAGANDA

44. Assistant Surgeons of the Public Health Department in the course of their inspections of dispensaries gave demonstrations and lectures illustrated by Magic lantern slides. The subjects dealt with included common prevalent diseases such as Cholera, Small-pox, *Kala Azar*, Malaria, Tuberculosis, Leprosy as well as General Sanitation and Food. The expenditure was met partly from the King George Thanksgiving (Anti-Tuberculosis) Fund and partly from the Public Health Budget. The King George Thanksgiving (Anti-Tuberculosis) Fund allotment was because anti-tuberculosis propaganda was added to the ordinary programme. It is proposed to develop this line of propaganda work.

## KING GEORGE THANKSGIVING (ANTI-TUBERCULOSIS) FUND

45. During the year under report an anti-Tuberculosis clinic was started in Shillong and a Sub-Assistant Surgeon Tuberculosis Home Visitor was appointed. Sixty-one cases were investigated and diagnosed in 1937 and 30 patients were examined in the clinic. Proposals to expand the work of this clinic and to open similar clinics in other districts have been made with a view to their being put into operation next year.

## CHAPTER XII

## RURAL AND URBAN HOUSING CONDITIONS

46. In urban areas housing conditions continued to be not satisfactory. The houses are generally ill-designed, the villages ill-planned and there is a great deal of overcrowding both in villages and in the houses. The standard of housing in towns and villages is far below what would be necessary to make for even moderately healthy living.

In rural areas the conditions become worse still during the rainy season, particularly in low-lying areas owing to floods. Poverty, ignorance and apathy even among the better circumstanced stand in the way of any improvement. There were no building societies or Co-operative schemes for the improvement of urban and rural housing during the year under review.

In the industrial centres, housing conditions are reported to be improving. In urban areas the housing conditions can be improved if municipal executive authorities are empowered to order demolition of condemned houses and houses found unfit for human habitation and their reconstruction on hygienic principles. In rural areas the problem may be ameliorated by the example set in the towns and with the spread of information regarding healthy house design and construction among all classes. If the better class were to take more care in regard to houses their example will sooner or later be copied by the less well-to-do. The local bodies should take the initiative to demonstrate to the people in selected areas how simple it may be to improve the housing conditions of both the urban and rural population in the province.

## CHAPTER XIII

## PUBLIC HEALTH ADMINISTRATION

47. No new schemes for developing or for improving the administration of Public Health in the province were initiated or carried out during the year. The budget allotments under the head "Public Health" for the years 1936-37 and 1937-38

Budget grants for the department.



amounted to Rs.7,58,900 and Rs.8,79,200 respectively, while those for the heads administered directly by the Director of Public Health amounted to Rs.6,01,206 and Rs.5,92,004 respectively.

The receipts of the department for the years 1936-37 and 1937-38 were Rs. 1,06,868 and Rs. 1,09,046 respectively.

The strength of the Public Health Department during the year was as follows :—

1. Director of Public Health	...	...	...	1.
2. Assistant Directors of Public Health	...	...	...	2 (One post of Assistant Director of Public Health was vacant throughout year.)
3. Assistant Surgeons	...	...	...	7 (3 permanent and 4 temporary.)
4. Urban Health Officers	...	...	...	9.
5. Sub-Assistant Surgeons	...	...	...	110 (83 permanent and 27 temporary.)
				General Public Health duty—79.
				Malaria duty—9.
				Epidemic duty—21.
				Vaccine Depot—1.
6. Vaccination inspecting staff	...	...	...	39 Inspector of Vaccination—9.
				Sub Inspector of vaccination—30.
7. Clerks	...	...	...	27 Director of Public Health's office—14.
				Assistant Directors of Public Health office—2.
				Civil Surgeons' offices—10.
				P. I.—1.
8. Biochemist	...	...	...	1.
9. Compounders	...	...	...	4 (Temporary).
10. Literate packers	...	...	...	2 (1 in Vaccine Depot 1 in Public Health Laboratory.)
11. Loaders	...	...	...	2 (in the Vaccine Depot.)
12. Disinfectant Carriers	...	...	...	42 (30 permanent and 12 temporary.)
13. Sample taker	...	...	...	1 Public Health Laboratory.
14. Laboratory Assistants and Media makers	...	...	...	16, 3, vaccine section 5, Bacteriophage section 8.
15. Vaccinators appointed by Government in Hill Districts.				43.
16. Vaccinators appointed by Local Boards	...	...	...	375 (these are not Departmental staff but are appointed by Local Boards and paid by them).
Ditto by Municipalities	...	...	...	23 Ditto by Municipalities.
Ditto by Development Boards	...	...	...	2 Ditto by Development Boards.
17. Magic lantern operators	...	...	...	6 (temporary).
18. Servants	...	...	...	126 (Daftry 1, Orderlies 3, Chaprasis 122).

The Shillong Municipal Board employs a fully qualified Health Officer whose salary is met in part by a contribution from Government.

## CHAPTER XIV

### VACCINATION

This Chapter and all statistical tables connected therewith refer to the period from April 1st 1937 to March 31st 1938.

#### INTRODUCTORY

48. Vaccination was performed as usual, throughout the province among a total population of 9,247,857.

#### VACCINATION AGENCIES

49. Vaccination among the general population was performed by 451 Vaccinators, *viz.*, 386 Local Board, 30 Municipal and 35 Government Vaccinators and among the labour force of the Tea Estates by the Garden Medical Officers. Railway employees were vaccinated by the Railway Medical Officers and in Jails vaccination was performed by Sub-Assistant Surgeons in medical charge. The total number of vaccinators employed during the year under report was the same

as in the preceding year, *viz.*, 451. Disinfectant Carriers of Epidemic units were also employed, as in the previous year, as vaccinators when their services were not required for cholera or other epidemic duty. The average number of persons vaccinated by each vaccinator was 1,831 during the year under report as compared with 1,935 in the preceding year.

#### TOTAL NUMBER OF OPERATIONS

50. The total number of vaccination operations performed in Assam during the year 1937-38 by all agencies was 825,907 of which 438,017 were primary and 387,890 re-vaccinations as compared with 872,626 of which 437,917 were primary and 434,709 re-vaccinations in the preceding year. This shows an increase of 100 in primary vaccinations and decrease of 46,819 in re-vaccinations. Variations in the district returns are criticised in paragraph 55.

The total number of operations performed by different Agencies during the year under report and in the previous year is shown below :—

Number of operations by			1936-37	1937-38
Local Board, Municipal and Government	Vaccinators	...	789,533	745,723
Ditto	ditto	by Staff of dispensaries	9,728	8,534
Ditto	ditto	by Tea Garden Agencies	66,929	60,870
Ditto	ditto	by Jail Asylum, Police and Emigration Hospital agencies.	4,502	5,933
Ditto	ditto	by Railway agencies	1,934	4,847
Ditto	ditto	by Private Medical Practitioners	...	...
			872,626	825,907

There was a decrease of 46,719 operations in the year under report as compared with the previous year.

#### VACCINATIONS AMONG THE GENERAL POPULATION

51. The number of operations performed among the general population by Local Board, Municipal and Government Vaccinators during the year shows a decrease of 43,810 operations as compared with the figure of the preceding year.

#### DEATHS FROM SMALL-POX

52. A total of 2,324 deaths against 1,244 in the previous year from small-pox occurred in the province including the Hill districts during the year 1937-38 as shown below :—

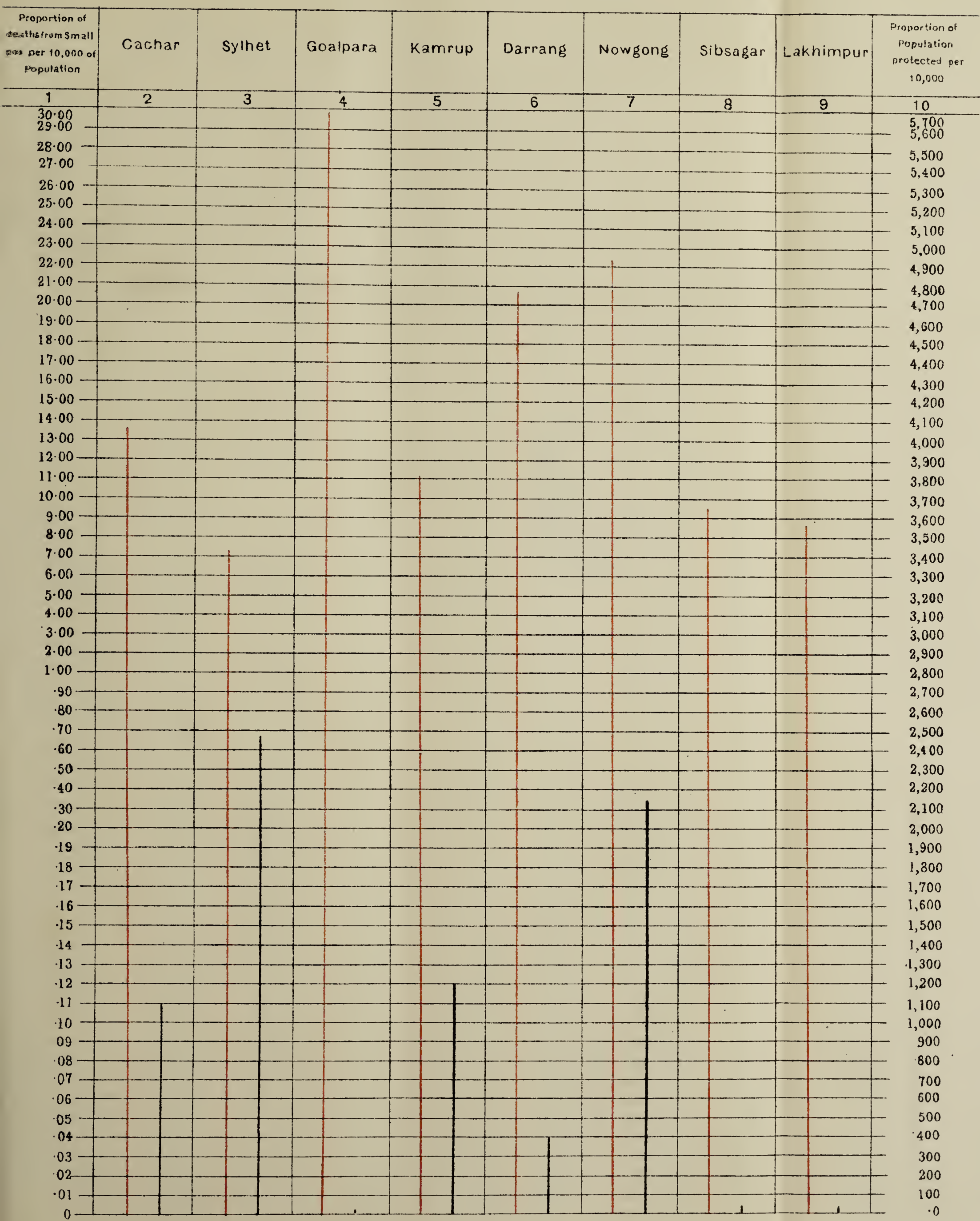
Cachar	...	...	...	...	...	...	64
Sylhet	...	...	...	...	...	...	1,805
Khasi and Jaintia Hills	...	...	...	...	...	...	Nil.
Naga Hills	...	...	...	...	...	...	Nil.
Lushai Hills	...	...	...	...	...	...	Nil.
Goalpara	...	...	...	...	...	...	7
Kamrup	...	...	...	...	...	...	118
Darrang	...	...	...	...	...	...	26
Nowgong	...	...	...	...	...	...	196
Sibsagar	...	...	...	...	...	...	6
Lakhimpur	...	...	...	...	...	...	4
Garó Hills	...	...	...	...	...	...	1
Manipur	...	...	...	...	...	...	97
Sadiya	...	...	...	...	...	...	Nil.
Balipara	...	...	...	...	...	...	Nil.
Total	...	...	...	...	...	...	2,324

The highest mortality from small-pox was reported from the Sylhet district. All the Subdivisions of the district more or less were effected with small-pox during the year under report. Karimganj and Jaldhup thanas in Karimganj subdivision and Habiganj and Baniachong thanas in the Habiganj subdivision and the Kanaighat thana in the North Sylhet Subdivision in the Sylhet district were the worst affected areas. In some instances it has been noticed that there is a tendency amongst the public to conceal cases of small-pox and thereby the disease is allowed to spread before the cases are brought to light.

The ratio of deaths from small-pox during the year 1937-38 was 0.25 per mille of population as compared with 0.12 in the preceding year. The death rate reported from small-pox was highest in the district of Sylhet 0.66 against



The following diagram illustrates the death rates from Small-pox in each District for the year 1936-37 side by side with the proportion of the population protected against the disease by Vaccination during the seven years 1931-32 to 1937-1938.



NOTE Black lines indicate death rate from Small-pox  
Red lines indicate the proportion protected by Vaccination





0.25 in the preceding year. The death-rate reported from Nowgong was 0.35 against 0.06 in the preceding year. The attached chart illustrates the death-rates from small-pox in each district side by side with the proportion of population protected against the disease by vaccination during the 7 years from 1931-32 to 1937-38.

53. Vaccination in rural areas in Assam is not compulsory, but every encouragement is given to the people to get themselves vaccinated. Much opposition to vaccination is met with in certain localities. To overcome this hostile attitude, regulations under the Epidemic Diseases Act, 1897 (III of 1897), are resorted to and these areas are declared to be small-pox infected areas under the Epidemic Diseases Act. During the year under report, the Machhli village in the Karimganj subdivision and Habiganj and Baniachong thanas in the Habiganj subdivision of the Sylhet district, Gobindpur, Rangpur, Madhurband and Barabhour, (Dakshinmohonpur) in the Silchar subdivision of the Cachar district and the whole of the Goalpara district were declared as small-pox infected areas.

54. A total of 8,534 vaccination operations was performed by the dispensary staff during the year under report of which 1,694 were primary and 6,840 re-vaccinations as compared with 9,728 operations in 1936-37 with 2,388 primary and 7,340 re-vaccinations.

55. The percentage of successful operations performed by all establishments combined was 92.41 for primary vaccination and 57.74 for re-vaccination as compared with 88.08 and 67.48 respectively in the year 1936-37. The percentage of successful operations in primary vaccinations and re-vaccinations in the case of dispensary staff was 80.27 and 54.36 as against 87.03 and 68.35 respectively in the previous year.

Complaints as regards the lack of potency of the lymph supplied, were received from the Sylhet and Lushai Hills districts. Investigations showed that the cause of failure was not the quality of lymph. The principal cause of failure was found to be delay in using the lymph after receipt, which in the Lushai Hills was considerable. A container has now been devised in which it is hoped the lymph will retain its potency for a much longer time. To remove the other causes of failure, *viz.*, washing the vaccinated parts immediately after the operation and bad technique, etc., arrangements are now being made to replace the ordinary vaccinating lancets by rotary scarifiers.

56. All vaccinations were performed, as in previous years, with glycerinated calf lymph manufactured in the Provincial Vaccine Depot at Shillong.

57. The following table shows the increase and decrease in vaccination operations performed in individual districts, as compared with the preceding year:—

Districts	1936-37	1937-38	Increase	Decrease
	Total	Total		
Cachar ... ..	51,151	71,090	19,939	...
Sylhet ... ..	216,103	272,352	56,249	...
Khasi and Jaintia Hills ... ..	23,985	21,094	...	2,891
Naga Hills ... ..	17,609	18,848	1,239	...
Lushai Hills ... ..	10,116	14,645	4,529	...
Goalpara ... ..	102,066	84,661	...	17,405
Kamrup ... ..	81,932	71,384	...	10,548
Darrang ... ..	79,640	43,767	...	35,873
Nowgong ... ..	64,223	57,734	...	6,489
Sibsagar ... ..	83,342	59,858	...	23,484
Lakhimpur ... ..	50,378	50,774	396	...
Garohills ... ..	19,219	20,189	970	...
Manipur State ... ..	67,318	34,150	...	33,168
Sadiya Frontier Tract ... ..	4,914	4,877	...	37
Balipara Frontier Tract ... ..	630	484	...	146
Total ... ..	872,626	825,907	...	46,719



The increase in the Sylhet district is the highest, 56,249. In the Sibsagar district the decrease 23,484 is due to the fact that the number of operations in the Tea Gardens during the year under report was less than half of the number of operations done in previous year. The fall of 35,873 in the Darrang district and 33,168 in the Manipur State is due to the fact that there was no epidemic of small-pox in these two districts during the year under report. No vaccination operations were performed by the dispensary staffs in the districts of Cachar and Kamrup.

58. The Subordinate Inspecting Staff was the same as in the previous years and consisted of 9 Inspectors and 30 Sub-Inspectors. Composition and strength of the Inspecting Staff. of Vaccination. Two Sub-Inspectors of Vaccination were entertained by the Manipur State during the year under report.

59. In towns where vaccination is compulsory 7,373 infants were born: of these 900 died, leaving 6,473 available for vaccination during the year 1937-38, out of these 3,033 or 46·86 per cent. were successfully vaccinated, as compared with 43·14 per cent. of the previous year. In Maulvi Bazar town 95·49 per cent. of the available infants were vaccinated. In other towns the percentage of vaccinated children was—Mangaldai 86·11 ; Nowgong 71·39 ; Gauhati 69·41 ; Dhubri 68·20 ; Jorhat 56·39 ; Sunamganj 54·76 ; Palashbari 53·22 ; Sylhet 52·14 ; Gauripur 51·18 ; Barpeta 49·28 ; Silchar 49·01 ; Shillong 47·10 ; Nazira 46·05 ; Karimganj 34·36 ; Habiganj 31·58 ; Dibrugarh 28·60 ; Tezpur 24·09 ; Goalpara 22·28 ; Srimangal 18·75 ; Sibsagar 12·82 ; Golaghat 12·42 ; Doom Dooma 10·33 ; Tinsukia 6·45 and Hailakandi 1·06. The protection afforded by vaccination in towns is far from satisfactory as with the exception of Maulvibazar, Mangaldai and Nowgong the percentage of children vaccinated is very low. In the majority of towns no attempts appear to have been made to vaccinate all the children available. The apathy if continued is fraught with serious danger to the community as an epidemic of small-pox may break out at any time. The attention of Municipal Boards is being drawn to this and it is hoped steps will be taken to rectify this without delay.

In compulsory rural areas under village authorities in Sylhet and Nowgong (there being none in the other districts) 5,115 and 1,026 operations were performed as compared with 4,162 and 5,662 respectively in the previous year. During the year under report 1,682 operations were performed under Village Authorities in the Sibsagar district as compared with 2,220 in the previous year.

60. The amount of vaccine lymph manufactured during the year under report was 1,004,720 tubes against 1,009,156 tubes. Vaccine Depot. and 12,696·5 grammes of vesicles were collected against 12,992 grammes in the previous year in the Vaccine Depot, Shillong. A total of 1,040,770 tubes was issued during the year. Each tube contains sufficient vaccine lymph to vaccinate one person. The number of calves hired and inoculated during the year under report was 470 including 8 buffalo calves but lymph was taken from 303 calves only. A total of 122 calves were rejected, 103 on account of failure of operations, 4 on account of unsatisfactory vesicles and 15 on account of illness as compared with 40, 8 and 45 in the preceding year. Forty calves were used for potency test of which 123 batches of lymph were tested with good results.

The average number of tubes prepared per calf was 3,316 as compared with 1,697 in the year 1936-37. The average yield per calf was 44·41 grammes during the year under report. The total cost of working of the Vaccine Depot, Shillong was Rs.16,698 of which Rs.5,107 was on account of establishment, Rs.2,430 on account of hire of calves, Rs.115 on account of feed of calves, Rs.5,236 on account of purchase of capillary tubes and instruments and Rs.3,810 on account of miscellaneous expenditure as compared with Rs.18,979 in the preceding year. Lymph was, as usual, supplied free to Civil Surgeons, Inspectors and Sub-Inspectors of Vaccination, Local and Municipal Boards. With effect from the year under report lymph is supplied free to the Sadiya and Balipara Frontier Tracts. The Military Department, Tea Gardens, Railways, Mission Hospitals, Manipur State and private individuals were supplied as usual on payment at the rate of one anna per tube.

The subordinate charge of the Vaccine Depot was held by Dr. Sudhiranjan Bhattacharjee throughout the year.



61. The total expenditure, including the charges of the Vaccine Depot, on vaccination in Assam during the year under report was Rs.1,07,196-15-9 only as compared with Rs.1,09,364-10-0 in the previous year. The average cost of each successful vaccination during the year 1937-38 was three annas four pies only as compared with three annas and three pies only in the previous year.

62. Primary vaccinations and re-vaccinations performed by the Dispensary Staff numbered 1,694 and 6,840 respectively, by Tea Garden Medical Officers 33,835 and 27,035 respectively, by Medical Officers in charge of Jail Hospitals, Mental Hospitals, Police Hospitals and Infectious diseases Hospitals 122 and 5,811 respectively and by Railway Medical Officers 509 and 4,338 respectively. The percentage of successful vaccinations were 80·27 and 54·36, 93·09 and 77·00, 64·15 and 59·15 and 94·20 and 41·38 respectively. No vaccination operation was performed by Private Medical Practitioners during the year under report.

63. The Inspectors and Sub-Inspectors of Vaccination performed their duties  
Vaccinating Inspecting Staff. efficiently and satisfactorily.

## CHAPTER XV

## OTHER PUBLIC HEALTH SERVICES

64. The principal industry in the province is the cultivation and manufacture of tea. Sanitary conditions on tea estates are generally satisfactory. There are special regulations under the Industrial Hygiene Act, 1932 in regard to the supervision of sanitary conditions on tea estates. The Indian Factories Act controls sanitation in factories and also in regard to offensive trades. The Assistant Directors of Public Health have been appointed additional inspectors of factories within their respective jurisdiction to see that the provisions of sections 13 to 21 of the Factories Act are properly observed in the factories.

65, The Civil Surgeon, Naga Hills, inspected the sanitary condition of Borjan Colliery during the year under report. The Civil Surgeon, Lakhimpur, and the Assistant Director of Public Health, Assam Valley Division, who are also *ex-officio* Inspector of Mines, did not inspect any mines during the year under review. There is no mine under the jurisdiction of the Assistant Director of Public Health, Surma Valley and Hill Division.

66. In 1937 a total of 1,620 samples was examined in the Public Health Laboratory against 2,000 in the previous year, as shown in the table below—

*I. Table.—General Public Health Analyses.—*

						1936	1937
Water samples—							
(a) Chemical	...	...	...	...	...	288	302
(b) Bacteriological		...	...	...	...	514	413
Bleaching powder	...	...	...	...	...	...	1
Vaccine lymph	...	...	...	...	...	492	439
Total						1,294	1,155

*II. Table.—Food Analyses.—*

						1936		1937	
						Number examined	Number found adulterated	Number examined	Number found adulterated
Butter	...	...	...	...	...	2	...	1	...
Ghee	...	...	...	...	...	168	90	154	83
Milk	...	...	...	...	...	327	123	163	56
Mus ard oil	...	...	...	...	...	111	17	74	4
Tea	...	...	...	...	...	52	28	41	3
Tobacco	...	...	...	...	...	...	...	2	2
Turmeric	...	...	...	...	...	...	...	1	...
Wheat flour	...	...	...	...	...	30	1	29	...
Linseed oil	...	...	...	...	...	2	1	...	...
Rice	...	...	...	...	...	4	...	...	...
Oil cake	...	...	...	...	...	1	...	...	...
Sago	...	...	...	...	...	1	...	...	...
Soji	...	...	...	...	...	1	...	...	...
Sugar	...	...	...	...	...	7	...	...	...
Total						706	260	465	148

The tables show that there were 87 fewer samples of water examined. The fall in the number of samples of vaccine lymph is due to the fact that a smaller number of calves is used to obtain a larger yield and the number of samples therefore is less. The number of samples of foodstuffs examined is a little more than two-thirds of the number examined last year, and more than half of this fall is due to the fall in number of samples sent from the Shillong Municipal Board which sent 53 samples only. Local authorities have not made full use of the provisions of the Assam Pure Food Act to raise the standard of their food supplies. As usual bacteriological and chemical examinations of all water works and of Jail supplies were carried out systematically throughout the year. The Public Health Laboratory also functioned as the Provincial Depot for the supply and despatch of Urea-stibamine and spare parts of syringes to Public Health Dispensaries.



Statement of the working of the Assam Pure Food Act in the Municipalities during the year 1937

Name of Municipal Boards	Number of samples purchased	Number of samples sent for analysis	Number of samples found adulterated	Number of prosecutions instituted	Number of convictions secured for 1st offence	Number of convictions secured for subsequent offences	Amount of fine or imprisonment for each first offence (average)	Amount of fine or imprisonment for each subsequent offence (average)	Nature of offence	Total amount of fine realised during 1937	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
Hailakandi Town Committee.	...	...	...	...	...	...	Rs. a. p.	...	...	Rs. a. p.	
Srimangal Town Committee.	...	...	...	...	...	...	...	...	...	...	
Maulvi Bazar Municipal Board.	...	...	...	...	...	...	...	...	...	...	
Sunamganj Municipal Board.	...	...	...	...	...	...	...	...	...	...	
Silchar Municipal Board.	36	36	10	10	9 (1 absconded)	...	13 9 9	...	Adulterated milk, ghee, mustard oil and tea.	122 8 0	Locally 239 milk samples were examined: 19 were found watered and were destroyed under section 16 of the Assam Pure Food Act. For 18 remaining adulterated foodstuffs samples of the year 1936 left for the consideration of the Board for prosecution, 7 prosecutions were made in the year 1937 out of which one was acquitted and six were convicted with a total fine of Rs.120.
Sylhet Municipal Board.	23	23	1	1	...	...	...	...	...	...	The case was withdrawn by the Chairman and the party warned for future.

Statement of the working of the Assam Pure Food Act in the Municipalities during the year 1937—concl'd.

Name of Municipal Boards	Number of samples purchased	Number of samples sent for analysis	Number of samples found adulterated	Number of prosecutions instituted	Number of convictions secured for 1st offence	Number of convictions secured for subsequent offences	Amount of fine or imprisonment for each first offence (average)	Amount of fine or imprisonment for each subsequent offence (average)	Nature of offence	Total amount of fine realised during 1937	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
Habiganj Board.	9	9	2	2	2	...	Rs. a. p. 12 8 0	...	Adulterated milk	Rs. a. p. 140 0 0	Two cases are still pending. Of the 6 cases found adulterated 3 persons were prosecuted, 2 were warned for the first offence on condition that they made a donation for public purposes and one proved innocent. The real culprit is absconding.
Karimganj Board.	13	13	6	3	1	...	50 0 0	...	Adulterated ghee and mustard oil.	50 0 0	
Shillong Municipal Board	51	51	26	2	2	...	5 0 0	...	Adulterated milk	10 0 0	Barabazar is reported to be a source of great difficulty in the administration of the Pure Food Act. It is under the control of the Siem of Myllem. Unwholesome and adulterated articles of food are sold there without any check and control.
Sibsagar Board.	...	...	...	...	...	...	...	...	...	...	



Nowgong Municipal Board	44	44	10	6	6	...	16	11	0	...	Adulterated milk and ghee.	100	0	0
Tinsukia Town Committee	...	...	...	...	...	...	...	...	...	...	...	75	0	0
Dibrugarh Municipal Board	96	96	22	21	5	...	15	0	0	...	Adulterated milk and ghee.	...	...	...
Nazira Town Committee	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Polashbari Town Committee	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barpeta Municipal Board	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jorhat Municipal Board ...	67	67	17	17	13	...	170	0	0	...	Adulterated butter, wheat and tea	170	0	0
Dhubri Municipal Board ...	35	35	12	12	12	...	350	0	0	...	Adulterated milk and ghee.	350	0	0
North Lakhimpur Town Committee.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Doom Dooma Town Committee.	1	1	1	1	1	...	30	0	0	...	Adulterated wheat flour.	30	0	0
Tezpur Municipal Board ...	39	39	14	10	9	...	290	0	0	...	Adulterated milk, ghee and tea.	290	0	0
Golaghat Municipal Board	4	4	1	1	1	...	30	0	0	...	Adulterated ghee.	30	0	0
Gauhati Municipal Board	32	32	13	12	7	...	50	0	0	...	Adulterated milk and ghee.	50	0	0

Four cases were withdrawn, ten could not be traced and two under report.

Two cases under section 273, Indian Penal Code, for selling rotten fish were instituted by Police during 1937. In one of the case there were 3 accused and they were fined Rs. 5 each and in the other case there was one accused who was also fined Rs. 5.

Two cases have been struck off as the accused could not be traced, one case was withdrawn and 3 cases are still pending.

Statement of the working of the Assam Pure Food Act in the Local Boards during the year 1937

Name of Local Boards	Number of samples purchased	Number of samples sent for analysis	Number of samples found adulterated	Number of prosecutions instituted	Number of convictions secured for 1st offence	Number of convictions secured for subsequent offences	Amount of fine or imprisonment for each first offence (average)	Amount of fine or imprisonment for each subsequent offence (average)	Nature of offences	Total amount of fine realised during 1937	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
Sunamganj Local Board	...	...	...	...	...	...	...	...	...	Rs. a. p.	
Habiganj Local Board	...	...	...	...	...	...	...	...	...	...	
South Sylhet Local Board	...	...	...	...	...	...	...	...	...	...	
North Sylhet Local Board	...	...	...	...	...	...	...	...	...	...	
Karimganj Local Board	...	...	...	...	...	...	...	...	...	...	
Jorhat Local Board	...	1	1	1	1	...	10 0 0	...	Adulterated	10 0 0	
Mangaldai Local Board	...	...	...	...	...	...	...	...	...	...	
Barpeta Local Board	...	...	...	...	...	...	...	...	...	...	
Dibrugarh Local Board	...	...	...	...	...	...	...	...	...	...	
Sibsagar Local Board	...	...	...	...	...	...	...	...	...	...	
Golaghat Local Board	...	2	1	1	1	...	20 0 0	...	Adulterated	20 0 0	
Dhubri Local Board	...	...	...	...	...	...	...	...	...	...	
Goalpara Local Board	...	...	...	...	...	...	...	...	...	...	
Nowgong Local Board	...	3	1	1	1	...	10 0 0	...	Adulterated	10 0 0	
Silchar Local Board	...	...	...	...	...	...	...	...	...	...	
Hailakandi Local Board	...	...	...	...	...	...	...	...	...	...	
North Lakhimpur Local Board	...	...	...	...	...	...	...	...	...	...	
Gauhati Local Board	...	3	1	...	...	...	...	...	...	...	The man with whom the adulterated mustard oil was found will be prosecuted.



Port Health Administration.

67. Nil

Sanitary works.

68. This is dealt with in Chapter VI, under the heading "Urban Sanitation".

Public Health Board.

69. There was no meeting of the Public Health Board during the year under review. The Health Board (Epidemics) functioned as in previous years.

## CHAPTER XVI

### GENERAL REMARKS

Research work.

70. Research work in the province is entrusted to the Assam Medical Research Society. The Society receives an annual contribution of Rs. 20,000 from the Government of Assam. The Director of Public Health, Assam, is an *ex-officio* member of the Governing Body. The activities of the Society have been confined to malaria, cholera and dysentery. As in previous years, the survey of malarious areas was undertaken. The work done by the Society in regard to malaria is mentioned in paragraph 40 of this Report. The experiment with Cholera and dysentery bacteriophage was discontinued in the Nowgong district and Habiganj subdivision from the 1st April 1937.

Leper Asylums and Colonies.

71. The table below gives the details of patients treated in the existing leper institutions in the province :—

—	Remain- ing from the previous year	Admis- sions during the year	Total	Dis- charged, cured or relieved	Dis- charged other- wise	Died	Remain- ing at the end of the year
1	2	3	4	5	6	7	8
Leper Asylum, Sylhet ...	71	28	99	11	5	9	74
Leper Hospital, Kohima ...	23	3	26	...	1	1	24
Leper Ward, Dhubri ...	13	15	28	6	13	...	9
Leper Asylum, Gauhati ...	20	27	47	19	4	3	21
Leper Colony, Tura ...	69	45	114	5	29	2	78

The treatment is available in out-patient clinics at sadar and subdivisional headquarters hospitals and at many of the outlying Public Health Department and Local Board dispensaries. The American Baptist Mission Leper Colony at Jorhat treated 114 lepers during the year.

Famine.

72. No remarks.

Public Health Acts.

73. No Public Health Act was passed during the year.

Public health essays.

74. The Secretary, Assam Red Cross Society, did not submit any scheme for holding essay and poster competitions in public health.

Bacteriophage.

75. The Pasteur Institute and Medical Research Institute, Shillong, issued 402,634 doses of bacteriophage during 1937.

Plasmoquine and Atebrine.

76. These drugs were tried experimentally in the treatment and prevention of malaria as in previous years. It is reported that the results have been satisfactory.

77. Lieut.-Colonel T. D. Murison, I.M.S., held charge of the Department up to the 31st March 1937 and Dr. S. H. Paul, L.R.C.P., M.R.C.S., D.P.H., D.T.M., for the rest of the year. During the months of January, February and March Lieut.-Colonel Murison inspected *kala-azar*, leprosy, yaws and vaccination work in the districts of Nowgong, Sylhet, Cachar and Kamrup and also visited the Habiganj Municipality.

In April Dr. Paul supervised cholera epidemic in the South Sylhet subdivision and conducted the examination of the Berry-White Medical School at Dibrugarh. In May, he supervised cholera epidemics in the Sylhet district and also attended the Central Advisory Board of Health at Simla. In July and September he inspected the municipalities of Gauhati, Nowgong, Jorhat, Golaghat, Karimganj and Sylhet and also inspected dispensaries. In November, he conducted the examination of the Berry-White Medical School at Dibrugarh and supervised dysentery and malaria epidemics in the Sibsagar district. In December he attended the All-India Medical Research Workers' Conference in Delhi and also inspected *kala-azar*, leprosy and vaccination work in the Sylhet district. August and October were spent at headquarters for administrative work. Dr. S. H. Paul, held the post of the Assistant Director of Public Health, Assam Valley Division, for the first three months of the year. In January, he inspected the municipalities of Mangaldai and Goalpara and also inspected vaccination work and a few dispensaries in the districts of Darrang and Goalpara. In February, he delivered lectures on hygiene and vaccination to the students of the Berry-White Medical School and inspected the vaccination work in Lakhimpur district. In March he did office and laboratory work at headquarters.

Dr. S. C. Dutt, M.B., D.P.H., held the post of the Assistant Director of Public Health, Surma Valley and Hill Division, from the 27th April to the 25th November. He was transferred to the Assam Valley on 26th November 1937. In April, he inspected cholera-affected villages of South Sylhet subdivision. In May, he inspected cholera and small-pox affected parts of Habiganj and North Sylhet subdivisions and organised cholera epidemic work in North Sylhet subdivision and also inspected a few dispensaries. In June, he inspected some dispensaries and visited cholera-affected villages in North Sylhet subdivision. In July, he inspected anti-malarial work of Haripur and Jaintiapur and inspected some dispensaries in Sylhet district. He also inspected the municipality of Shillong and a factory at Shillong. In August he held enquiries about the outbreak of typhoid in Shillong and Karimganj and supervised sanitary arrangements in a *mela* at Ajmiriganj. He also inspected a few dispensaries in Sylhet district. In September, he delivered lectures to Inspectors of Co-operative Societies on nutrition and personal hygiene, etc., carried out a malaria survey of Sylhet Police lines and supervised dysentery epidemic work in Sibsagar district. In October, he supervised the dysentery epidemic work in the Sibsagar district. In November, he inspected the sanitation and anti-malaria operation at Haflong and also inspected the Public Health Dispensary in the Cachar district. In December, he inspected the anti-malaria centres at Kachugaon and Haltugaon and vaccination work in Goalpara district.

78. The office staff has worked laboriously as usual, during the year. Babu Ishwar Chandra Das, Personal Assistant to the Director of Public Health, has again shown himself diligent and efficient in the management of the office, and was specially commended by my predecessor D. Paul.

A. M. V. HESTERLOW,  
Lieut.-Colonel, I.M.S.,  
Director of Public Health, Assam.



STATEMENTS  
VITAL STATISTICS

IMPERIAL STATEMENT No. I.—*Statement showing the births registered*

No.	Districts	Population according to the Census of 1931			Grand total number of births registered		
		Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8
	<b>SURMA VALLEY</b>						
1	Cachar ...	284,738	254,073	538,811	10,365	9,877	20,242
2	Sylhet ...	1,407,645	1,316,697	2,724,342	51,080	47,843	98,923
	Total ...	1,692,383	1,570,770	3,263,153	61,445	57,720	119,165
	<b>ASSAM VALLEY</b>						
3	Goalpara ...	470,273	412,475	882,748	16,156	14,954	31,110
4	Kamrup ...	513,345	463,401	976,746	10,188	9,078	19,266
5	Darrang ...	317,103	267,714	584,817	9,109	8,787	17,896
6	Nowgong ...	298,585	263,996	562,581	6,065	5,719	11,784
7	Sibsagar ...	496,288	437,038	933,326	13,336	12,574	25,910
8	Lakhimpur ...	399,108	325,474	724,582	11,934	11,159	23,093
	Total ...	2,494,702	2,170,098	4,664,800	66,788	62,271	129,059
	Total for the province.	4,187,085	3,740,868	7,927,953	128,233	119,991	248,224

IMPERIAL STATEMENT No. II.—*Statement showing the deaths*

No.	Districts	Area in square miles	Average population per square miles	Number of deaths registered			Deaths per 1,000		
				Male	Female	Total	Cholera	Small-pox	Plague
1	2	3	4	5	6	7	8	9	10
	<b>SURMA VALLEY</b>								
1	Cachar ...	1,972	273	6,854	6,959	13,813	·57	·13	...
2	Sylhet ...	5,478	497	37,854	34,904	72,758	1·60	·66	...
	Total ...	7,450	438	44,708	41,863	86,571	1·43	·57	...
	<b>ASSAM VALLEY</b>								
3	Goalpara ...	3,985	222	10,727	9,459	20,186	·04	·01	...
4	Kamrup ...	3,844	254	6,007	5,563	11,570	·35	·16	...
5	Darrang ...	2,842	206	6,750	6,689	13,439	·28	·06	...
6	Nowgong ...	3,896	144	3,990	3,711	7,701	·22	·21	...
7	Sibsagar ...	5,131	182	9,803	9,437	19,240	·07	·008	...
8	Lakhimpur ...	4,234	171	8,890	8,457	17,347	·04	·003	...
	Total ...	23,932	195	46,167	43,316	89,483	·16	·07	...
	Total for the province	31,382	253	90,875	85,179	176,054	·69	·28	...



*in the districts of Assam during the year 1937*

Ratio of births per 1,000 of population			Number of males born to every 100 females born	Mean ratio of births per 1,000 during the pre- vious five years		
Male	Female	Total		Male	Female	Total
9	10	11	12	13	14	15
19.24	18.33	37.57	105	17.75	16.94	34.69
18.75	17.56	36.31	107	18.33	17.02	35.35
18.83	17.69	36.52	106	18.23	17.01	35.24
18.30	16.94	35.24	108	16.92	15.82	32.74
10.43	9.29	19.72	112	11.08	10.35	21.43
15.58	15.02	30.60	104	15.39	14.66	30.05
10.78	10.17	20.95	106	9.90	9.22	19.12
14.29	13.47	27.76	106	14.70	13.75	28.45
16.47	15.40	31.87	107	15.24	14.61	29.85
14.32	13.35	27.67	107	13.95	13.13	27.08
16.17	15.14	31.31	107	15.72	14.72	30.44

*registered in the districts of Assam during the year 1937*

of population from—								Mean ratio of deaths per 1,000 during the previous five years		
Fever	Dysentery and diarrhoea	Respiratory di- seases	Injuries	All other causes	All causes			Male	Female	Total
					Male	Female	Total			
11	12	13	14	15	16	17	18	19	20	21
12.79	2.14	1.68	.19	8.13	24.07	27.39	25.64	21.06	23.04	22.00
14.70	1.55	.52	.29	7.39	26.89	26.51	26.71	22.82	21.92	22.38
14.38	1.64	.71	.27	7.51	26.42	26.65	26.53	22.53	22.09	22.32
21.84	.16	.12	.16	.54	22.81	22.93	22.87	24.43	23.26	23.88
8.88	.48	.24	.16	1.58	11.70	12.00	11.85	14.09	14.27	14.18
15.26	2.06	1.20	.34	3.78	21.29	24.99	22.98	19.66	22.39	20.91
10.52	.92	.34	.17	1.30	13.36	14.06	13.69	12.32	12.72	12.50
11.85	2.97	1.54	.23	3.95	19.75	21.59	20.61	17.41	18.73	18.03
11.84	3.33	2.34	.31	6.08	22.27	25.98	23.91	18.81	21.85	20.18
13.39	1.61	.94	.22	2.79	18.51	19.96	19.18	17.95	18.83	18.36
13.80	1.62	.85	.24	4.74	21.70	22.77	22.21	19.80	20.20	19.19

## IMPERIAL STATEMENT No. III.—Deaths registered

No.	Districts	Population according to the census of 1931	January	February	March	April
1	2	3	4	5	6	7
	SURMA VALLEY					
1	Cachar ... {	Urban ... 16,195	21	10	13	26
		Rural ... 5,22,616	1,151	910	861	1,110
		Total ... 5,38,811	1,172	920	874	1,136
2	Sylhet ... {	Urban ... 45,883	78	52	60	84
		Rural ... 2,678,459	6,574	5,574	4,783	6,141
		Total ... 2,724,342	6,652	5,626	4,843	6,225
3	Goalpara... {	Urban ... 21,442	43	23	30	22
		Rural ... 861,306	1,860	1,326	1,449	1,543
		Total ... 882,748	1,903	1,349	1,479	1,565
4	Kamrup ... {	Urban ... 39,028	62	44	40	71
		Rural ... 937,718	863	547	378	1,041
		Total ... 976,746	925	591	418	1,112
5	Darrang ... {	Urban ... 11,964	19	6	14	25
		Rural ... 572,853	967	647	805	1,007
		Total ... 584,817	986	653	819	1,032
6	Nowgong... {	Urban ... 10,413	11	18	13	19
		Rural ... 552,168	539	277	464	586
		Total ... 562,581	550	295	477	605
7	Sibsagar ... {	Urban ... 23,175	30	36	27	33
		Rural ... 910,151	1,184	1,163	860	1,070
		Total ... 933,326	1,214	1,199	887	1,103
8	Lakhimpur {	Urban ... 27,914	20	25	45	34
		Rural ... 696,668	1,066	815	894	999
		Total ... 724,582	1,086	840	939	1,033
	Total for rural circles ...	7,731,939	14,204	11,259	10,494	13,497
	Ratio per mille of population	...	22·35	17·76	16·51	21·23
	Total for the town ...	196,014	284	214	242	314
	Ratio per mille for towns	...	17·63	13·28	15·02	19·49
	Total for the province ...	7,927,953	14,488	11,473	10,736	13,811
	Ratio per mille for the province.	...	22·23	17·61	16·48	21·20

Ratios have been calculated with reference to number of days in each month. This table includes.



*in the districts of Assam during each month of the year 1937*

May	June	July	August	September	October	November	December	Total deaths registered during the year 1937
8	9	10	11	12	13	14	15	16
21	27	21	19	33	25	26	26	268
1,286	1,244	1,225	1,106	894	1,175	1,323	1,260	13,545
1,307	1,271	1,246	1,125	927	1,200	1,349	1,286	13,813
83	68	87	74	58	54	68	81	847
6,400	6,480	5,497	5,346	5,854	5,822	5,949	7,491	71,911
6,483	6,548	5,584	5,420	5,912	5,876	6,017	7,572	72,758
31	36	31	38	40	37	57	24	412
1,654	1,604	1,820	1,619	1,624	1,647	1,813	1,815	19,774
1,685	1,640	1,851	1,657	1,664	1,684	1,870	1,839	20,186
47	101	83	72	76	71	78	44	789
1,309	1,203	977	950	889	757	995	872	10,781
1,356	1,304	1,060	1,022	965	828	1,073	916	11,570
12	26	21	33	28	33	24	33	274
1,161	1,528	1,115	1,361	1,045	1,113	1,220	1,196	13,165
1,173	1,554	1,136	1,394	1,073	1,146	1,244	1,229	13,439
27	16	20	15	26	8	20	19	212
429	750	1,343	754	593	823	490	441	7,489
456	766	1,363	769	619	831	510	460	7,701
27	46	49	45	37	44	53	39	466
1,696	2,209	1,886	2,150	1,672	1,768	1,653	1,463	18,774
1,723	2,255	1,935	2,195	1,709	1,812	1,706	1,502	19,240
39	41	47	52	53	69	64	41	530
1,267	1,782	1,632	1,487	1,766	1,820	1,749	1,540	16,817
1,306	1,823	1,679	1,539	1,819	1,889	1,813	1,581	17,347
15,202	16,800	15,495	14,773	14,337	14,925	15,192	16,078	1,72,256
23·92	26·44	24·38	23·25	22·56	23·49	23·91	25·30	22·28
287	361	359	348	351	341	390	307	3,798
17·81	22·41	22·28	21·61	21·79	21·17	24·21	19·06	19·38
15,489	17,161	15,854	15,121	14,688	15,266	15,582	16,385	176,054
23·77	26·34	24·33	23·21	22·54	23·43	24·01	25·14	22·21

municipalities and small towns in which registration of vital statistics is compulsory.

## IMPERIAL STATEMENT No. IV.—Deaths registered according to

A.—Rural circles		Under 1 year													Total		
		Not exceeding 1 month						Total	Over 1 month and not exceeding 6 months			Over 6 months and not exceeding 12 months					
		Male			Female				Male	Female	Total	Male	Female	Total			
		Under one Week	Over one week	Total	Under one week	Over one week	Total										
2		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Cachar ..	691	370	1,061	507	312	819	1,880	457	415	872	277	227	504	1,795	1,461	3,256
2	Sylhet ..	3,188	2,128	5,316	2,588	1,570	4,158	9,474	2,799	2,347	5,146	1,436	1,435	2,871	9,551	7,940	17,491
3	Goalpara ..	795	544	1,339	614	431	1,045	2,384	1,052	922	1,974	429	364	793	2,820	2,331	5,151
4	Kamrup ..	317	335	652	271	267	538	1,190	450	446	896	244	217	461	1,346	1,201	2,547
5	Darrang ..	262	289	551	218	262	480	1,031	585	564	1,149	323	342	665	1,459	1,386	2,845
6	Nowgong ..	118	168	286	87	137	224	510	344	313	657	173	167	340	803	704	1,507
7	Sibsagar ..	396	337	733	362	311	673	1,406	598	548	1,146	335	353	688	1,666	1,574	3,240
8	Lakhimpur ..	275	328	603	224	272	496	1,099	488	467	955	392	433	825	1,483	1,396	2,879
Total for rural circles.		6,042	4,499	10,541	4,871	3,562	8,433	18,974	6,773	6,022	12,795	3,609	3,538	7,147	20,923	17,993	38,916
Ratio per mille		..	..	..	..	..	..	..	..	..	..	..	..	..	167·68	154·13	161·13
B.—TOWNS																	
Surma Valley																	
1	Silchar ..	2	2	4	1	..	1	5	5	6	11	1	2	3	10	9	19
2	Hailakandi ..	3	1	4	3	2	5	9	3	2	5	..	..	..	7	7	14
3	Hailong ..	1	1	2	3	..	3	5	1	1	2	..	3	3	3	7	10
4	Sylhet ..	17	8	25	14	7	21	46	14	10	24	11	14	25	50	45	95
5	Maulvibazar ..	6	..	6	..	2	2	8	1	1	2	2	2	4	9	5	14
6	Karimganj ..	4	5	9	4	..	4	13	5	1	6	3	3	6	17	8	25
7	Habiganj ..	13	5	18	7	7	14	32	8	8	16	2	6	8	28	28	56
8	Sunamganj ..	8	1	9	5	3	8	17	6	9	15	1	3	4	16	20	36
9	Sreemangal ..	..	..	..	..	..	..	..	..	..	..	3	1	4	3	1	4
Assam Valley																	
1	Dhubri ..	13	5	18	4	7	11	29	3	3	6	2	5	7	23	19	42
2	Goalpara ..	2	1	3	1	3	4	7	2	4	6	3	1	4	8	9	17
3	Gauripur ..	9	..	9	10	1	11	20	6	4	10	4	5	9	19	20	39
4	Gauhati ..	15	17	32	11	5	16	48	10	15	25	9	9	18	51	40	91
5	Barpeta ..	8	15	23	6	12	18	41	7	12	19	8	9	17	38	39	77
6	Palasbari ..	1	2	3	2	8	10	13	2	2	4	3	1	4	8	13	21
7	Tezpur ..	10	2	12	8	2	10	22	8	4	12	4	2	6	24	16	40
8	Mangaldai ..	1	1	2	..	1	1	3	4	..	4	..	2	2	6	3	9
9	Nowgong ..	7	5	12	6	5	11	23	5	4	9	4	3	7	21	18	39
10	Jorhat ..	4	9	13	5	5	10	23	6	3	9	4	3	7	23	16	39
11	Sibsagar ..	4	..	4	1	..	1	5	5	..	5	3	2	5	12	3	15
12	Nazira ..	3	..	3	3	..	3	6	3	3	6	..	..	..	6	6	12
13	Golaghat ..	1	3	4	3	2	5	9	1	5	6	1	2	3	6	12	18
14	Dibrugarh ..	7	4	11	6	3	9	20	7	19	26	5	4	9	23	32	55
15	Tinsukia ..	4	1	5	1	..	1	6	3	2	5	1	1	2	9	4	13
16	Doom Dooma ..	..	..	..	2	..	2	2	..	..	..	..	..	..	..	2	2
17	North Lakhimpur.	4	..	4	..	..	..	4	3	2	5	..	..	..	7	2	9
Total for towns		147	88	235	106	75	181	416	118	120	238	74	83	157	427	384	811
Ratio per mille		..	..	..	..	..	..	..	..	..	..	..	..	..	123·62	118·12	120·95
Total for the province.		6,189	4,587	10,776	4,977	3,637	8,614	19,390	6,891	6,142	13,033	3,683	3,621	7,304	21,350	18,377	39,727
Ratio per mille of population.		..	..	..	..	..	..	..	..	..	..	..	..	..	166·49	153·15	160·04



age in the districts of (rural circles) and towns of Assam during the year 1937

1 and under 5 years		5 and under 10 years		10 and under 15 years		15 and under 20 years		20 and under 30 years		30 and under 40 years		40 and under 50 years		50 and under 60 years		60 and up- wards		Total (all ages)	
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
894	878	419	339	209	214	229	11,368	512	1,055	540	712	515	403	482	460	1,117	943	6,712	6,833
4,851	4,512	2,433	2,162	1,427	1,261	1,580	2,009	3,112	4,766	3,271	3,189	3,094	2,292	2,978	2,331	5,091	4,061	37,388	34,523
1,214	1,208	808	679	481	452	495	652	998	1,247	996	853	898	611	823	549	973	686	10,506	9,268
1,041	1,122	430	359	224	177	219	267	386	581	460	460	457	320	458	330	581	362	5,602	5,179
1,249	1,167	541	511	315	288	294	418	467	839	591	660	609	470	503	415	543	440	6,571	6,594
603	617	322	303	216	157	179	214	303	436	332	350	374	280	323	251	407	315	3,862	3,627
1,904	1,737	878	778	437	394	455	544	680	1,185	816	915	822	667	802	643	1,066	811	9,526	9,248
1,776	1,652	759	615	307	286	254	397	619	1,209	887	854	758	603	784	547	940	691	8,567	8,250
13,532	12,893	6,590	5,746	3,616	3,229	3,705	4,869	7,077	11,318	7,893	7,993	7,527	5,646	7,153	5,526	10,718	8,309	88,734	83,522
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15	13	4	1	2	..	6	4	11	18	14	6	9	5	9	3	18	15	98	74
4	6	1	..	..	1	2	2	2	4	5	5	5	2	3	2	2	2	31	31
1	4	..	1	..	..	..	1	1	2	1	4	2	..	3	2	2	..	13	21
35	26	13	7	5	4	7	13	15	23	7	8	19	10	13	10	30	17	194	168
1	6	1	3	..	2	3	4	3	5	6	2	1	2	3	..	3	2	30	31
4	10	4	3	3	3	1	7	14	12	8	5	6	2	6	1	6	3	69	54
6	6	5	5	1	1	1	3	11	6	3	3	7	5	9	3	16	9	87	69
14	11	2	2	4	2	..	1	9	7	6	5	4	..	7	2	9	5	71	55
4	..	1	1	..	..	1	..	3	..	1	..	..	..	1	..	1	2	15	4
8	9	6	4	4	2	5	8	11	8	14	7	13	6	9	4	5	7	98	74
8	6	1	1	5	3	1	9	5	6	14	4	5	2	15	5	8	3	70	48
5	7	4	5	3	7	2	2	3	4	5	2	3	2	3	3	6	17	53	69
22	19	3	8	4	2	3	6	20	20	16	13	18	10	8	11	24	13	169	142
32	29	12	21	2	11	11	12	14	20	13	10	18	12	21	10	36	32	197	196
8	8	4	5	..	1	2	3	1	3	2	2	6	5	6	3	2	3	39	46
9	11	7	9	3	3	5	4	23	18	22	5	18	9	22	7	28	5	161	87
2	1	1	2	1	..	1	..	..	..	3	..	1	..	2	1	1	1	18	8
15	11	5	4	4	6	6	3	17	9	18	9	24	6	9	2	9	16	128	84
17	4	5	1	3	5	4	2	16	12	8	8	12	2	12	8	19	7	109	65
11	9	7	2	2	1	2	2	2	13	6	4	5	4	2	2	10	2	59	42
5	6	4	4	..	..	..	3	..	4	2	..	4	1	5	4	2	..	28	28
1	4	4	6	4	3	6	4	18	12	6	1	18	2	9	1	9	9	81	54
10	15	7	13	4	6	16	14	42	25	48	13	43	13	27	15	30	10	250	156
8	5	..	2	1	2	2	1	2	5	3	1	5	..	1	3	5	2	36	25
..	1	2	1	..	..	..	..	2	1	1	1	..	1	..	..	..	..	5	7
1	3	..	..	3	..	2	2	1	3	3	2	3	2	7	3	5	2	32	19
236	230	103	111	58	65	89	110	246	245	235	120	249	103	212	105	286	184	2,141	1,657
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13,768	13,123	6,693	5,857	3,674	3,294	3,794	4,979	7,323	11,563	8,128	8,113	7,776	5,749	7,365	5,631	11,004	8,493	90,875	85,179
63.73	83.22	16.87	21.04	5.87	6.98	5.10	6.92	21.20	30.35	16.88	18.99	13.73	11.26	13.60	10.12	83.33	64.05	21.70	22.77

## STATEMENT No. IV(a).—showing

Districts				Christians		Hindus	
				Number	Ratio per 1,000 births	Number	Ratio per 1,000 births
Cachar	...	...	...	4	·20	1,704	84·18
Sylhet	...	...	...	4	·04	6,817	68·91
Goalpara	...	...	...	114	3·66	2,285	73·45
Kamrup	...	...	...	23	1·19	2,133	110·71
Darrang	...	...	...	116	6·48	2,162	120·81
Nowgong	...	...	...	9	·76	1,055	89·53
Sibsagar	...	...	...	19	·73	2,969	114·59
Lakhimpur	...	...	...	94	4·07	2,139	92·63
Total	...	...	...	383	1·54	21,264	85·66

Separate figures for Indian

## IMPERIAL STATEMENT No. V.—Deaths registered according

No.	Districts	Number of deaths registered											
		Christians			Hindus			Muhammadans			Buddhist		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	<b>SURMA VALLEY</b>												
1	Cachar .. ..	15	12	27	4,057	4,058	8,115	2,694	2,796	5,490	..	..	..
2	Sylhet .. ..	10	11	21	14,071	13,030	27,101	23,665	21,772	45,437	..	..	..
	Total .. ..	25	23	48	18,128	17,088	35,216	26,359	24,568	50,927	..	..	..
	<b>ASSAM VALLEY</b>												
3	Goalpara .. ..	205	230	435	4,260	3,749	8,009	4,389	3,833	8,222	2	3	5
4	Kamrup .. ..	18	30	48	4,726	4,370	9,096	959	841	1,800	1	..	1
5	Darrang .. ..	210	276	486	4,904	4,801	9,705	659	599	1,258	8	..	8
6	Nowgong .. ..	33	46	79	2,447	2,359	4,806	907	748	1,655	..	..	..
7	Sibsagar .. ..	101	93	194	8,288	7,969	16,257	345	298	643	56	37	93
8	Lakhimpur .. ..	348	285	633	7,739	7,414	15,153	320	241	561	21	19	40
	Total .. ..	915	960	1,875	32,364	30,662	63,026	7,579	6,560	14,139	88	59	147
	Total for the province	940	983	1,923	50,492	47,750	98,242	33,938	31,128	65,066	88	59	147



## mortality under one year by classes

Muhammadans		Buddhists		Other classes	
Number	Ratio per 1,000 births	Number	Ratio per 1,000 births	Number	Ratio per 1,000 births
1,548	76.47	...	...	43	2.12
10,875	109.93	...	...	25	.25
2,213	71.13	...	...	637	20.48
434	22.53	...	...	146	6.02
233	13.02	...	...	383	21.40
304	25.80	...	...	178	15.11
62	2.39	6	23	268	10.34
310	13.42	3	13	412	17.84
15,979	64.37	9	.04	2,092	8.43

Christians are not available.

to class in the districts of Assam during the year 1937

Ratio of deaths per 1,000 of population																	
Other classes			Christians			Hindus			Muhammadans			Buddhists			Other classes		
Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
88	93	181	10.26	9.72	10.01	22.92	25.73	24.25	26.03	30.25	28.03	..	..	..	31.77	34.23	32.99
108	91	199	6.06	8.24	7.04	24.44	24.23	24.34	28.58	28.07	28.33	..	..	..	49.47	47.82	48.70
196	184	380	8.03	8.95	8.45	24.09	24.57	24.32	28.29	28.30	28.29	..	..	..	39.57	39.83	39.69
1,871	1,644	3,515	20.93	26.31	23.47	20.44	21.12	20.75	21.37	21.02	21.21	6.53	10.87	8.59	40.32	37.70	39.05
303	322	625	5.93	11.77	8.60	12.75	12.88	12.81	7.45	7.53	7.49	1.76	..	1.27	29.50	33.24	31.32
969	1,013	1,982	24.84	38.00	30.92	19.89	22.96	21.30	17.56	19.98	18.63	9.94	..	6.75	40.66	48.27	44.28
603	558	1,161	12.62	18.95	15.66	14.17	15.41	14.45	9.49	9.10	9.31	..	..	..	21.78	21.18	21.49
1,013	1,040	2,053	14.12	15.30	14.66	18.60	20.16	19.33	13.85	15.69	14.64	38.51	31.92	35.59	59.25	67.40	63.12
462	498	960	41.65	43.79	42.59	21.45	24.64	22.90	18.24	28.66	21.62	6.60	7.71	7.09	49.92	69.66	58.52
5,221	5,075	10,296	23.22	28.60	25.69	17.93	19.46	18.65	14.87	15.13	14.99	13.87	13.10	13.55	38.85	41.16	39.96
5,417	5,259	10,676	22.11	27.20	24.45	19.74	21.03	20.35	23.55	23.92	23.72	13.72	13.01	13.42	38.88	41.11	39.95

## IMPERIAL STATEMENT No. VI.—Deaths registered from different causes in the

1	2			3	4				5	6	7	8	9	10
No.	District and towns			Population according to the census of 1931	Births			Birth-rate	Cholera	Small-pox	Plague	Fever	Dysentery and diarrhoea	Respiratory diseases
					Male	Female	Total							
	DISTRICT EXCLUDING TOWNS													
	<i>Surma Valley</i>													
1	Cachar	..	..	522,616	10,147	9,665	19,812	37·91	306	70	..	6,831	1,109	862
2	Sylhet	..	..	2,678,459	50,300	47,079	97,379	36·36	43,58	1,767	..	39,830	4,106	1,359
	Total	..	..	3,201,075	60,447	56,744	117,191	36·61	4,664	1,837	..	46,661	5,215	2,221
	<i>Assam Valley</i>													
3	Goalpara	..	..	861,306	15,790	14,599	30,389	35·28	37	6	..	19,126	117	71
4	Kamrup	..	..	937,718	9,323	8,271	17,594	18·76	335	152	..	8,369	390	137
5	Darrang	..	..	572,853	8,915	8,604	17,519	30·58	161	34	..	8,891	1,138	637
6	Nowgong	..	..	552,168	5,816	5,523	11,339	20·54	123	116	..	5,871	476	163
7	Sibsagar	..	..	910,151	12,946	12,192	25,138	27·62	60	6	..	10,883	2,710	1,382
8	Lakhimpur	..	..	696,668	11,542	10,807	22,349	32·08	32	2	..	8,435	2,329	1,614
	Total	..	..	4,530,864	64,332	59,996	124,328	27·44	748	316	..	61,575	7,160	4,004
	Total of districts excluding towns			7,731,939	124,779	116,740	241,519	31·24	5,412	2,153	..	108,236	12,375	6,225
	TOWNS													
	<i>Surma Valley</i>													
1	Silchar	..	..	13,069	155	135	290	22·19	..	..	..	30	33	33
2	Hailakandi	..	..	2,002	52	51	103	51·44	1	..	..	22	9	3
3	Haflong	..	..	1,124	11	26	37	32·92	..	..	..	10	3	6
4	Sylhet	..	..	21,435	359	352	711	33·17	3	..	..	94	70	33
5	Maulvibazar	..	..	4,314	77	65	142	32·92	..	..	..	16	8	..
6	Karimganj	..	..	5,691	93	93	186	32·68	1	7	..	29	14	18
7	Habiganj	..	..	7,577	123	128	251	33·12	5	2	..	24	12	15
8	Sunamganj	..	..	5,326	106	101	207	38·86	3	24	..	34	1	3
9	Sreemangal	..	..	1,540	22	25	47	30·52	1	..	..	15	2	..
	Total	..	..	62,078	998	976	1,974	31·80	14	33	..	274	152	111



## districts and towns of the province of Assam during the year 1937

11						12	13	14											15
Injuries						All other causes	Total	Ratio of deaths per 1,000 of population											No.
Suicide		Wounds or accidents	Snakes and wild animals	Rabies	Total			Cholera	Small-pox	Plague	Fever	Dysentery and diarrhoea	Respiratory diseases	Injuries	All other causes	From all causes			
Male	Female															For the year	Mean of previous five years		
3	2	79	4	5	93	4,274	13,545	·59	·13	..	13·07	2·12	1·65	·18	8·18	25·92	22·68	1	
44	25	663	25	6	763	19,728	71,911	1·63	·66	..	14·87	1·53	·50	·28	7·37	26·85	22·49	2	
47	27	742	29	11	856	24,002	85,456	1·46	·57	..	14·58	1·63	·69	·27	7·50	26·70	22·45		
8	13	66	38	1	126	291	19,774	·04	·01	..	22·21	·13	·08	·14	·34	22·96	24·08	3	
22	9	77	30	4	142	1,256	10,781	·36	·16	..	8·92	·42	·15	·15	1·34	11·50	13·85	4	
19	11	85	53	22	190	2,114	13,165	·23	·06	..	15·52	1·98	1·11	·33	3·69	22·98	20·88	5	
5	9	49	18	1	82	658	7,489	·22	·21	..	10·63	·86	·30	·15	1·19	13·56	12·35	6	
20	12	144	16	9	201	3,532	18,774	·07	·007	..	11·96	2·98	1·52	·22	3·88	20·63	18·07	7	
16	19	143	22	4	204	4,201	16,817	·05	·003	..	12·11	3·34	2·32	·29	6·03	24·14	20·31	8	
90	73	564	177	41	945	12,052	86,800	·16	·07	..	13·59	1·5	·88	·21	2·66	19·16	18·34		
137	100	1,306	206	52	1,801	36,054	172,256	·70	·28	..	14·00	1·60	·81	·23	4·66	22·28	20·04		
..	..	6	..	..	6	70	172	..	..	..	2·30	2·53	2·53	·46	5·36	13·16	12·70	1	
..	..	1	..	..	1	26	62	·50	..	..	10·99	4·50	1·50	·50	12·99	30·97	19·98	2	
..	..	3	..	..	3	12	34	..	..	..	8·90	2·67	5·34	2·67	10·68	30·25	28·47	3	
1	..	7	..	..	8	154	362	·14	..	..	4·39	3·27	1·54	·37	7·18	16·89	15·21	4	
1	..	..	..	..	1	36	61	..	..	..	3·71	1·85	..	·23	8·34	14·14	14·14	5	
..	..	4	..	..	4	50	123	·18	1·23	..	5·10	2·46	3·16	·70	8·79	21·61	18·09	6	
..	..	5	..	..	5	93	156	·66	·26	..	3·17	1·58	1·98	·66	12·27	20·59	20·19	7	
..	..	2	..	..	2	59	126	·56	4·50	..	6·38	·19	·56	·38	11·08	23·65	19·53	8	
..	..	..	..	..	..	1	19	·65	..	..	9·74	1·30	..	..	·65	12·34	1·30	9	
2	..	28	..	..	30	501	1,115	·23	·53	..	4·41	2·45	1·79	·48	8·07	17·96	15·90		

## IMPERIAL STATEMENT No. VI.—Deaths registered from different causes in the

1	2	3	4				5	6	7	8	9	10
No.	Districts and towns	Population according to the census of 1931	Birth				Cholera	Small-pox	Plague	Fever	Dysentery and Diarrhoea	Respiratory diseases
			Male	Female	Total	Birth-rate						
	TOWNS—concl'd.											
	Assam Valley											
10	Dhubri .. ..	9,435	170	163	333	35.29	..	..	..	29	12	15
11	Goalpara .. ..	6,415	111	110	221	34.45	..	..	..	55	10	19
12	Gauripur .. ..	5,592	85	82	167	29.86	..	..	..	67	3	1
13	Gauhati .. ..	21,797	395	349	744	34.13	7	..	..	64	30	40
14	Barpeta .. ..	13,777	369	361	730	52.98	1	..	..	216	34	41
15	Palasbari .. ..	3,454	101	97	198	57.32	..	..	..	27	14	17
16	Tezpur .. ..	10,268	174	152	326	31.75	1	..	..	24	57	63
17	Mangaldai .. ..	1,696	20	31	51	30.07	..	..	..	13	7	3
18	Nowgong .. ..	10,413	249	196	445	42.73	3	..	..	50	43	29
19	Jorhat .. ..	8,334	159	155	314	37.68	2	..	..	42	18	18
20	Sibsagar .. ..	6,669	100	98	198	29.68	..	..	..	45	26	12
21	Nazira .. ..	3,484	50	49	99	28.41	..	..	..	46	4	2
22	Golaghat .. ..	4,688	81	80	161	34.34	..	1	..	46	16	23
23	Dibrugarh .. ..	18,734	255	238	493	26.31	..	..	..	79	71	72
24	Tinsukia .. ..	6,160	90	71	161	31.20	..	..	..	29	5	4
25	Doom Dooma .. ..	1,900	13	12	25	13.16	..	..	..	8	1	2
26	North Lakhimpur .. ..	2,120	34	31	65	30.66	..	..	..	25	4	5
	Total ..	133,936	2,456	2,275	4,731	35.32	14	1	..	865	355	366
	Total for the towns ..	196,014	3,454	3,251	6,705	34.21	28	34	..	1,139	507	477
	Total for the province ..	7,927,953	128,233	1,19,991	2,48,224	31.31	5,440	2,187	..	1,09,375	12,882	6,702

This table includes Municipalities and small towns in

## Supplementary (optional) Statement VI(a)

Towns	1		2		3		4		5		6		7		8		9	
	Cerebrospinal fever		Typhus fever		Malaria		Enteric fever		Measles		Relapsing fever		Kala azar		Influenza		Black water fever	
	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio
Silchar ..	..	..	..	..	6	..	5	..	..	..	..	..	..	..	..	..	..	..
Sylhet ..	..	..	..	..	1	..	6	..	..	..	..	..	..	..	..	..	..	..
Habiganj ..	..	..	..	..	7	..	5	..	..	..	..	..	..	..	..	..	..	..
Karimganj ..	..	..	..	..	9	..	12	..	2	..	2	..	1	..	..	..	..	..
Gauhati ..	..	..	..	..	20	..	8	..	..	..	..	..	1	..	..	..	..	..
Barpeta ..	..	..	5	..	11	..	7	..	3	..	6	..	1	..	..	..	..	..
Dhubri ..	..	..	..	..	15	..	4	..	..	..	..	..	3	..	..	..	..	..
Goalpara ..	..	..	..	..	33	..	1	..	..	..	..	..	6	..	..	..	..	..
Tezpur ..	..	..	..	..	9	..	5	..	..	..	..	..	4	..	..	..	..	..
Nowgong ..	..	..	..	..	28	..	14	..	..	..	..	..	2	..	..	..	..	..
Jorhat ..	..	..	..	..	4	..	3	..	..	..	..	..	1	..	..	..	..	..
Dibrugarh ..	3	..	..	..	19	..	9	..	..	..	..	..	..	..	..	..	2	..
Shillong ..	..	..	..	..	10	..	12	..	2	..	..	..	..	..	..	..	..	..

This table includes municipalities and small towns in



districts and towns of the province of Assam during the year 1937.—concl'd.

11						12	13	14											15
Injuries						All other causes	Total	Ratio of deaths per 1,000 of population											No.
Suicide		Wounds and accidents	Snakes and wild animals	Rabies	Total			Cholera	Small-pox	Plague	Fever	Dysentery and diarrhoea	Respiratory diseases	Injuries	All other causes	From all causes			
Male	Female															For the year	Mean of previous five years		
1	..	4	1	..	6	110	172	..	..	..	3·07	1·27	1·59	·63	11·66	18·23	17·49	10	
..	..	11	..	..	11	23	118	..	..	..	8·57	1·56	2·96	1·71	3·59	18·39	12·94	11	
..	..	..	..	..	..	51	122	..	..	..	11·98	·54	·18	..	9·12	21·82	16·81	12	
..	..	5	..	1	6	164	311	·32	..	..	2·93	1·38	·84	·27	7·52	14·27	19·91	13	
..	..	5	..	..	5	96	393	·07	..	..	15·68	2·46	2·98	·36	6·97	28·53	25·40	14	
..	..	2	..	..	2	25	85	..	..	..	7·81	4·05	4·92	·58	7·24	24·61	22·29	15	
..	..	10	1	..	11	92	248	·09	..	..	2·33	5·55	6·14	1·07	8·96	24·15	23·18	16	
..	..	..	..	..	..	3	26	..	..	..	7·67	4·13	1·77	..	1·77	15·33	19·46	17	
1	..	7	4	..	12	75	212	·29	..	..	4·80	4·13	2·78	1·15	7·20	20·36	20·65	18	
..	..	4	..	..	4	90	174	·24	..	..	5·04	2·16	2·16	·48	10·80	20·88	17·40	19	
..	..	4	..	..	4	14	101	..	..	..	6·75	3·90	1·80	·60	2·10	15·14	12·29	20	
..	..	..	..	..	..	4	56	..	..	..	13·20	1·15	·57	..	1·15	16·07	14·93	21	
..	..	1	..	..	1	48	135	..	·21	..	9·81	3·41	4·91	·21	10·24	28·80	21·76	22	
..	..	10	..	2	12	172	406	..	..	..	4·22	3·79	3·84	·64	9·18	21·67	19·00	23	
..	..	4	..	..	4	19	61	..	..	..	5·62	·97	·78	·78	3·68	11·82	10·66	24	
..	..	..	..	..	..	1	12	..	..	..	4·21	·53	1·05	..	·53	6·32	9·47	25	
..	..	1	..	..	1	16	51	..	..	..	11·79	1·89	2·36	·47	7·55	24·06	20·28	26	
2	..	68	6	3	79	1,003	2,683	·10	·01	..	6·45	2·65	2·73	·59	7·49	20·03	18·98		
4	..	96	6	3	109	1,504	3,798	·14	·17	..	5·81	2·59	2·43	·55	7·67	19·38	18·00		
141	100	1,402	212	55	1,910	37,558	176,054	·69	·28	..	13·80	1·62	·85	·24	4·74	22·21	19·19		

which registration of vital statistics is compulsory.

for the year 1937

10		11		12		13		14		15		16		17		18	Deaths under one year			Infant mortality rate
Other fevers		Dysentery		Diarrhoea		Pneumonia		Pulmonary tuberculosis		Whooping cough		Pthisis		Other respiratory diseases		Deaths from child birth	Male	Female	Total	
Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio					
18	..	16	..	17	..	18	..	2	..	..	..	..	..	13	..	13	10	9	19	65·52
87	..	67	..	3	..	20	..	..	..	..	..	4	..	9	..	18	50	45	95	133·61
12	..	8	..	4	..	3	..	..	..	..	..	2	..	10	..	2	28	28	56	223·11
3	..	8	..	6	..	9	..	..	..	..	..	1	..	8	..	7	17	8	25	134·41
35	..	16	..	14	..	26	..	5	..	..	..	1	..	8	..	8	50	40	91	122·31
183	..	19	..	15	..	29	..	..	..	..	..	11	..	1	..	19	38	39	77	105·48
7	..	9	..	3	..	5	..	..	..	..	..	9	..	1	..	8	23	19	42	126·13
15	..	10	..	..	..	8	..	1	..	..	..	..	..	10	..	6	8	9	17	76·92
6	..	47	..	10	..	35	..	7	..	..	..	10	..	11	..	6	24	16	40	122·70
6	..	28	..	15	..	18	..	..	..	..	..	6	..	5	..	2	21	18	39	87·64
34	..	11	..	7	..	13	..	..	..	..	..	5	..	..	..	3	23	16	39	124·20
46	..	55	..	16	..	32	..	10	..	3	..	13	..	14	..	28	23	32	55	111·56
23	..	20	..	15	..	43	..	1	..	..	..	13	..	19	..	3	36	31	67	87·47

which registration of vital statistics is compulsory.

## IMPERIAL STATEMENT No. VII.—Deaths registered from cholera in the

No.	District	Circles of Registration		Villages		January	February	March	April	May	June
		Number in each district	Number from which deaths from cholera were reported	Number in each district	Number from which deaths from cholera were reported						
1	2	3	4	5	6	7	8	9	10	11	12
<i>Surma Valley</i>											
1	Cachar ...	13	10	1,607	113	11	3	10	63	129	80
2	Sylhet ...	41	39	11,717	1,167	461	244	231	985	1,179	560
	Total ...	54	49	13,324	1,280	472	247	241	1,048	1,308	640
<i>Assam Valley</i>											
3	Goalpara ...	18	4	3,188	24	10	10	1	11	2	...
4	Kamrup ...	16	13	2,738	57	6	11	20	83	104	39
5	Darrang ...	14	10	1,978	120	1	...	16	50	14	29
6	Nowgong ...	12	10	2,323	15	...	1	20	35	28	14
7	Sibsagar ...	17	8	2,284	22	...	5	7	10	20	9
8	Lakhimpur ...	17	3	2,498	3	4	1	...	1	1	5
	Total ...	94	48	15,009	241	21	28	64	190	169	96
	Total for the province.	148	97	28,333	1,521	493	275	305	1,238	1,477	736

## IMPERIAL STATEMENT NO. VIII.—Deaths registered from small-pox

No.	District	Circles of Registration		Villages		January	February	March	April	May	June
		Number in each district	Number from which deaths from small-pox were reported	Number in each district	Number from which deaths from small-pox were reported						
1	2	3	4	5	6	7	8	9	10	11	12
<i>Surma Valley</i>											
1	Cachar ...	13	5	1,607	38	4	9	8	7	13	5
2	Sylhet ...	41	35	11,717	613	75	94	111	173	278	295
	Total ...	54	40	13,324	651	79	103	119	180	291	300
<i>Assam Valley</i>											
3	Goalpara ...	13	3	3,188	9	...	...	...	4	1	...
4	Kamrup ...	16	10	2,738	43	29	10	16	19	20	13
5	Darrang ...	14	6	1,978	31	3	...	9	8	3	4
6	Nowgong ...	12	7	2,323	8	9	1	...	1	...	14
7	Sibsagar ...	17	4	2,284	4	...	1	...	...	1	2
8	Lakhimpur ...	17	2	2,498	2	...	...	...	...	...	...
	Total ...	94	34	15,009	97	41	12	25	32	25	33
	Total for the province	148	74	28,333	748	120	115	144	212	316	333



*districts of Assam during each month of the year 1937*

July	August	September	October	November	December	Total			Ratio of deaths per 1,000 of population			Mean ratio per 1,000 of previous five year	No.
						Male	Female	Total	Male	Female	Total		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
5 160	2 112	1 72	... 54	1 131	2 182	164 2,402	143 1,969	307 4,371	·58 1·70	·56 1·50	·57 1·60	·68 ·84	1 2
165	114	73	54	132	184	2,566	2,112	4,678	1·51	1·34	1·43	·81	
... 32 9 12 3 4	1 12 17 6 6 3	... 10 10 1 1 ...	... 3 4 5 ... 4	... 9 8 ... 1 9	2 14 4 4 ... ...	21 211 102 74 36 18	16 132 60 52 26 14	37 343 162 126 62 32	04 ·41 ·32 ·25 ·07 ·05	·04 ·28 ·22 ·20 ·06 ·04	·04 ·35 ·28 ·22 ·07 ·04	·37 1·13 ·61 ·05 ·21 ·10	3 4 5 6 7 8
60	45	22	16	27	24	462	300	762	·19	·14	·16	·45	
225	159	95	70	159	208	3,028	2,412	5,440	·72	64	·69	·60	

*in the districts of Assam during each month of the year 1937*

July	August	September	October	November	December	Total		Total	Number of deaths among children		Ratio of deaths per 1,000 of population			Mean ratio per 1,000 of previous five years	No.
						Male	Female		Under 1 year	One to 10 years	Male	Female	Total		
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
3 214	6 72	7 173	3 101	2 101	3 113	38 908	32 892	70 1,800	1 188	... 269	·13 ·65	·12 ·68	·13 ·66	·01 ·05	1 2
217	78	180	104	103	116	946	924	1,870	189	269	·56	·59	·57	·03	
1 13 1 18 ... ...	... 13 3 4 1 ...	... 5 3 8 ... 1	... 4 ... 21 ... ...	... ... ... 19 2 ...	... 10 ... 21 ... 1	3 78 17 70 3 2	3 74 17 46 4 ...	6 152 34 116 7 2	... 28 5 3 ... 2	... 45 17 1 1 ...	·01 ·15 ·05 ·23 ·006 ·005	·01 ·16 ·06 ·17 ·009 ...	·01 ·16 ·06 ·21 ·008 ·003	·09 ·20 ·05 ·02 ·05 ·02	3 4 5 6 7 8
33	21	17	25	21	32	173	144	317	38	64	·07	·07	·07	·08	
250	99	197	129	124	148	1,119	1,068	2,187	227	333	·27	·29	·28	·06	

## IMPERIAL STATEMENT NO. IX.—Deaths registered from fevers

No.	Districts				Circles of registration		Villages		January	February	March	April	May
					Number in each district	Number from which deaths from fevers were reported	Number in each district	Number from which deaths from fevers were reported					
1	2				3	4	5	6	7	8	9	10	11
	SURMA VALLEY												
1	Cachar	..	..	..	13	12	1,607	689	546	416	368	459	573
2	Sylhet	..	..	..	41	40	11,717	11,717	3,434	2,968	2,481	2,701	3,156
	Total				54	52	13,324	12,406	3,980	3,384	2,849	3,160	3,729
	ASSAM VALLEY												
3	Goalpara	..	..	..	18	17	3,183	2,895	1,828	1,298	1,414	1,498	1,590
4	Kamrup	..	..	..	16	15	2,738	685	691	440	276	793	995
5	Darrang	..	..	..	14	13	1,978	1,566	742	456	583	671	751
6	Nowgong	..	..	..	12	11	2,323	63	430	227	358	459	326
7	Sibsagar	..	..	..	17	17	2,284	850	644	660	525	552	1,007
8	Lakhimpur	..	..	..	17	17	2,498	1,874	518	363	419	460	688
	Total				94	90	15,009	7,933	4,853	3,444	3,575	4,433	5,357
	Total for the Province				148	142	28,333	20,339	8,833	6,828	6,424	7,593	9,086

## IMPERIAL STATEMENT NO. X.—Deaths registered from Dysentery and

No	Districts				Circles of registration		Villages		January	February	March	April	May
					Number in each district	Number from which deaths from Dysentery and Diarrhoea were reported	Number in each district	Number from which deaths from Dysentery and Diarrhoea were reported					
1	2				3	4	5	6	7	8	9	10	11
	SURMA VALLEY												
1	Cachar	..	..	..	13	12	1,607	259	84	52	60	135	152
2	Sylhet	..	..	..	41	40	11,717	1,847	376	264	292	487	377
	Total				54	52	13,324	2,106	460	316	352	622	529
	ASSAM VALLEY												
3	Goalpara	..	..	..	18	15	3,188	46	8	7	6	8	12
4	Kamrup	..	..	..	16	15	2,738	103	30	17	15	29	87
5	Darrang	..	..	..	14	13	1,978	301	60	85	38	95	113
6	Nowgong	..	..	..	12	11	2,323	40	14	7	24	29	48
7	Sibsagar	..	..	..	17	16	2,284	483	167	137	83	164	280
8	Lakhimpur	..	..	..	17	17	2,498	202	87	51	82	85	199
	Total				94	87	15,009	1,175	366	304	248	410	739
	Total for the province				148	139	28,333	3,281	826	620	600	1,032	1,268



*in the districts of Assam during each month of the year 1937*

							Total			Ratio of deaths per 1,000 of population			Mean ratio per 1,000 of previous five years	No.
							Male	Female	Total	Male	Female	Total		
June	July	August	September	October	November	December	Male	Female	Total	Male	Female	Total		
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
721	768	625	516	603	632	666	3,456	3,437	6,893	12·14	13·53	12·79	11·47	1
3,508	3,527	3,279	3,758	3,646	3,437	4,147	21,058	18,984	40,042	14·96	14·42	14·70	12·92	2
4,229	4,295	3,904	4,274	4,249	4,069	4,813	24,514	22,421	46,935	14·48	14·27	14·38	12·68	
1,583	1,766	1,567	1,568	1,635	1,764	1,766	10,203	9,074	19,277	21·69	22·00	21·84	22·41	3
1,067	802	740	713	623	812	724	4,509	4,167	8,676	8·78	8·99	8·88	10·36	4
1,086	812	843	648	790	700	846	4,545	4,383	8,928	14·33	16·37	15·26	13·62	5
603	1,128	611	469	653	394	258	3,068	2,853	5,921	10·28	10·81	10·52	10·15	6
1,394	1,172	1,319	928	1,012	1,030	819	5,715	5,347	11,062	11·52	12·23	11·85	10·17	7
1,111	914	793	760	845	860	845	4,479	4,097	8,576	11·22	12·59	11·84	9·81	8
6,844	6,594	5,873	5,086	5,563	5,560	5,258	32,519	29,921	62,440	13·04	13·79	13·39	12·90	
11,073	10,889	9,777	9,360	9,812	9,629	10,071	57,033	52,342	109,375	13·62	13·99	13·80	12·81	

*Diarrhoea in the districts of Assam during each month of the year 1937*

							Total			Ratio of deaths per 1,000 of population			Mean ratio per 1,000 of previous five years	No.
							Male	Female	Total	Male	Female	Total		
June	July	August	September	October	November	December	Male	Female	Total	Male	Female	Total		
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
111	83	79	69	101	134	94	618	536	1,154	2·17	2·11	2·14	1·83	1
446	284	341	358	281	321	386	2,363	1,850	4,213	1·68	1·40	1·55	1·00	2
557	367	420	427	382	455	480	2,981	2,386	5,367	1·76	1·52	1·64	1·13	
4	30	18	15	5	16	13	102	40	142	·22	·10	·16	·21	3
34	53	64	45	43	36	15	278	190	468	·54	·41	·48	·46	4
126	113	158	111	87	129	87	627	575	1,202	1·97	2·15	2·06	1·67	5
63	88	52	49	37	25	83	282	237	519	·94	·90	·92	·60	6
384	315	344	266	299	195	140	1,493	1,281	2,774	3·01	2·93	2·97	2·34	7
203	264	251	529	306	217	136	1,329	1,081	2,410	3·33	3·32	3·33	2·38	8
814	863	837	1,015	777	618	474	4,111	3,404	7,515	2·84	2·66	2·76	1·25	
1,371	1,230	1,307	1,442	1,159	1,073	954	7,092	5,790	12,882	1·69	1·55	1·62	1·25	

## IMPERIAL STATEMENT No. XI—Deaths registered from Respiratory diseases

No.	Districts	Circles of Registration		Villages		January	February	March	April	May
		Number in each district	Number from which deaths from respiratory diseases were reported	Number in each district	Number from which deaths from respiratory diseases were reported					
1	2	3	4	5	6	7	8	9	10	11
	SURMA VALLEY									
1	Cachar .. ..	13	11	1,607	118	81	58	78	103	88
2	Sylhet .. ..	41	38	11,717	714	129	109	121	129	63
	Total .. ..	54	49	13,324	832	210	167	199	232	151
	ASSAM VALLEY									
3	Goalpara .. ..	18	13	3,188	32	11	13	8	10	12
4	Kamrup .. ..	16	14	2,738	31	19	23	22	51	17
5	Darrang .. ..	14	13	1,978	136	25	16	31	65	89
6	Nowgong .. ..	12	10	2,323	29	20	15	23	14	10
7	Sibsagar .. ..	17	16	2,284	163	120	116	92	110	137
8	Lakhimpur .. ..	17	17	2,498	115	119	121	144	156	119
	Total .. ..	94	83	15,009	506	314	304	320	406	384
	Total for the province ..	148	132	28,333	1,338	524	471	519	638	535

## IMPERIAL STATEMENT No. XII.—Death registered from plague in the

No.	Districts	Circle of Registration		Villages		January	February	March	April	May	June
		Number in each district	Number from which deaths from plague were reported	Number in each district	Number from which deaths from plague were reported						
2	2	3	4	5	6	7	8	9	10	11	12
	<i>Surma Valley</i>										
1	Cachar ...	13	...	1,607	...	...	...	...	...	...	...
2	Sylhet ...	41	...	11,717	...	...	...	...	...	...	...
	Total ...	54	...	13,324	...	...	...	...	...	...	...
	<i>Assam Valley</i>										
3	Goalpara ...	18	...	3,188	...	...	...	...	...	...	...
4	Kamrup ...	16	...	2,738	...	...	...	...	...	...	...
5	Darrang ...	14	...	1,978	...	...	...	...	...	...	...
6	Nowgong ...	12	...	2,323	...	...	...	...	...	...	...
7	Sibsagar ...	37	...	2,284	...	...	...	...	...	...	...
8	Lakhimpur ...	17	...	2,498	...	...	...	...	...	...	...
	Total ...	94	...	15,009	...	...	...	...	...	...	...
	Total for the Province.	148	...	28,333	...	...	...	...	...	...	...



*districts of Assam during each month of the year 1937*

[illegible]

## APPENDIX II

### PROVINCIAL

*Statement showing details of registration in compulsory areas*

Compulsory registration area	Population according to the Census of 1931	Estimated birth at 228 per 1,000 married women between the ages of 15 and 40	Number of births registered during the year	Estimated birth-rate per mille	Registered birth-rate per mille	Number of deaths registered during the year		Death-rate per mille		Number of prosecutions under Act IV (B. C.) of 1873	Number of convictions
						Including deaths in hos- pitals	Excluding deaths in hos- pitals	Including deaths in hos- pitals	Excluding deaths in hos- pitals		
1	2	3	4	5	6	7	8	9	10	11	12
Silchar ...	13,069	Not available	290	Not available	22·19	172	124	13·16	9·49	...	...
Hailakandi ...	2,002		103		51·44	62	47	30·97	23·47	...	...
Haflong ...	1,124		37		32·92	34	22	30·25	19·57	...	...
Sylhet ...	21,435		711		33·17	362	319	16·89	14·88	17	14
Karimganj ...	5,691		186		32·68	123	98	21·61	17·21	...	...
Maulvibazar ...	4,314		142		32·92	61	45	14·14	10·43	} 15	15
Sreemangal ...	1,540		47		30·52	19	19	12·34	12·34		
Habiganj ...	7,577		251		33·12	156	133	20·59	17·55	...	...
Sunamganj ...	5,326		207		38·86	126	112	23·65	21·03	11	8
Dhubri ...	9,435		333		35·29	172	129	18·23	13·67	...	...
Goalpara ...	6,415		221		34·45	118	99	18·39	15·43	43	32
Gauripur ...	5,592		167		29·86	122	122	21·82	29·86	...	...
Gauhati ...	21,797		744		34·13	311	180	14·27	8·26	27	24
Barpeta ...	13,777		730		52·98	393	373	28·53	27·07	...	...
Palasbari ...	3,454		198		57·32	85	85	24·61	24·61	6	5
Tezpur ...	10,268		326		31·75	248	189	24·15	18·41	} 7	6
Mangaldai ...	1,696		51		30·07	26	1	15·33	·59		
Nowgong ...	10,413		445		42·73	212	148	20·36	14·21	29	29
Sibsagar ...	6,669		198		29·68	101	55	15·14	8·25	...	...
Nazira ...	3,484		99		28·41	56	56	16·07	16·07	} 50	29
Jorhat ...	8,334		314		37·68	174	123	20·88	14·76		
Golaghat ...	4,688		161		34·34	135	83	28·80	17·70	11	11
Dibrugarh ...	18,734		493		26·31	406	189	21·67	10·09	...	...
Doom Dooma...	1,900		25		13·16	12	12	6·32	6·32	} 54	54
North Lakhim- pur.	2,120		65		30·66	51	41	24·06	19·34		
Tinsukia ...	6,160		161		31·20	61	60	11·82	11·63		
Total ...	196,014		6,705		34·21	3,798	2,864	19·38	14·61	270	227



**STATEMENTS**  
**VACCINATIONS**

VACCINATION STATEMENT NO. I.—*Showing particulars of vaccination in the*

No.	Districts or towns	Population of district according to census of 1931	Average number of vaccinators employed throughout the year	Total number of persons vaccinated			Average number of persons vaccinated by each vaccinator	Primary		
				Male	Female	Total		Total	Suc	
									Under one year	One year and under six years
1	2	3	4	5	6	7	8	9	10	11
A.—DISTRICTS (EXCLUDING TOWNS)										
Surma Valley and Hill Division										
1	Silchar .. .. .	373,626	17	21,845	14,518	36,363	2,139	13,663	1,016	9,393
2	Hailakandi .. .. .	148,990	7	7,035	4,072	11,107	1,587	4,614	383	3,350
3	Hailong .. .. .	31,720	6	2,159	1,516	3,675	613	1,655	157	983
4	Sylhet .. .. .	559,125	18	28,818	22,373	51,191	2,843	28,288	1,100	15,549
5	Karimganj .. .. .	503,943	23	34,140	30,212	64,352	2,798	30,255	2,501	19,284
6	Maulvi Bazar .. .. .	445,510	17	16,802	15,034	31,836	1,873	18,757	1,238	12,679
7	Habiganj .. .. .	624,944	28	35,800	31,844	67,644	2,416	20,316	1,605	13,047
8	Sunamganj .. .. .	544,937	23	19,729	15,984	35,713	1 553	21,632	853	15,145
9	Shillong .. .. .	187,481	6	7,562	7,805	15,367	2,561	9,253	855	6,661
10	Jowai .. .. .	78,121	2	2,281	2,431	4,712	2,356	2,998	308	1,525
11	Kohima .. .. .	176,085	6	10,793	7,862	18,655	3,109	5,915	722	3,897
12	Lushai Hills .. .. .	124,404	8	8,601	6,044	14,645	1,831	7,687	1,140	3,504
Total of Surma Valley and Hill Division.		3,798,886	161	195,565	159,695	355,260	2,207	165,033	11,878	105,017
Assam Valley Division										
13	Dhubri .. .. .	605,688	27	23,152	20,775	43,927	1,627	23,757	2,822	14,931
14	Goalpara .. .. .	255,618	16	21,405	16,735	38,140	2,384	16,585	3,605	8,489
15	Gauhati .. .. .	636,240	35	24,054	15,237	39,291	1,123	25,498	2,933	16,321
16	Barpeta .. .. .	301,478	16	14,740	10,737	25,477	1,592	16,627	1,395	10,441
17	Tezpur .. .. .	334,900	23	10,031	8,986	19,017	827	15,104	4,153	6,869
18	Mangaldai .. .. .	237,953	18	10,636	8,319	18,955	1,053	11,885	1,278	6,137
19	Nowgong .. .. .	552,168	26	32,387	21,839	54,226	2,086	30,549	6,425	16,743
20	Jorhat .. .. .	319,159	18	10,401	6,968	17,369	965	11,093	879	7,702
21	Sibsagar .. .. .	320,899	10	5,546	4,669	10,215	1,021	9,584	169	7,321
22	Golaghat .. .. .	270,093	17	8,170	7,428	15,598	918	14,197	1,584	9,414
23	Dibrugarh .. .. .	546,164	24	13,375	10,835	24,210	1,009	18,568	2,878	11,531
24	North Lakhimpur .. .. .	150,504	8	4,891	4,472	9,363	1,170	8,096	1,093	6,102
25	Tura .. .. .	188,553	7	10,245	9,172	19,417	2,774	7,595	4,228	1,508
Total of Assam Valley Division		4,719,417	245	189,033	146,172	335,205	1,368	209,138	33,442	123,509
26	Imphal .. .. .	359,802	9	14,356	10,039	24,395	2,711	14,404	6,039	4,075
27	Sadiya .. .. .	48,975	4	2,350	2,027	4,377	1,094	3,398	517	908
28	Balipara Frontier Tract .. .. .	5,148	1	225	221	446	446	272	50	117
Total of districts (excluding towns).		8,932,228	420	401,529	318,154	719,683	1,714	392,245	51,926	233,626



## DEPARTMENT

province of Assam during the year 1937-38.

vaccination		Re-vaccination			Percentage of suc- cessful cases in which the result were known		Persons successfully vaccinated per 1,000 of population.	Total cost of the Vaccination Department.	Number of all successful vacci- nations and re-vaccinations performed by the vaccination staff only.	Average cost of each successful case performed by the vacci- nation staff.
cessful										
Total of all ages	Unknown	Total	Successful	Unknown	Primary	Revaccination				
12	13	14	15	16	17	18	19	20	21	22
								Rs. a. p.		Rs. a. p.
12,921	165	22,700	10,863	2,826	95.73	54.66	63.74	3,640 13 0	23,784	0 2 5
4,115	331	6,493	2,685	665	96.03	46.07	46.18	2,115 9 3	6,800	0 5 0
1,505	55	2,020	723	339	94.06	43.01	70.24	1,918 6 0	2,228	0 13 9
23,404	3,718	22,933	6,786	5,942	95.25	40.01	54.00	4,464 8 0	30,190	0 2 4
28,770	225	34,097	18,453	3,847	95.80	61.00	93.71	5,096 6 0	47,223	0 1 9
17,359	297	13,079	5,779	1,405	94.04	49.50	51.94	2,446 15 0	23,118	0 1 8
17,784	1,227	47,328	20,569	10,810	93.16	56.33	61.37	4,636 13 6	38,353	0 1 11
18,339	1,139	14,081	5,950	3,152	89.49	54.44	44.57	4,642 13 6	24,289	0 3 1
9,253	..	6,114	4,534	66	100.00	74.97	73.54	3,138 3 6	13,787	0 3 8
2,994	..	1,714	993	150	99.87	63.49	51.04	702 8 0	3,987	0 2 10
5,054	501	12,740	8,206	1,545	93.35	73.30	75.30	2,100 1 0	13,260	0 2 6
4,644	691	6,958	4,455	418	66.38	68.12	73.14	2,189 0 0	9,099	0 3 10
146,142	8,349	190,227	89,996	31,165	93.27	56.58	62.16	37,092 0 9	236,138	0 2 6
20,298	2,370	20,170	7,804	5,558	94.91	53.41	46.40	6,357 14 0	28,102	0 3 7
14,831	1,071	21,555	10,441	3,563	95.60	58.03	98.87	2,398 0 0	25,272	0 1 6
21,016	2,594	13,793	5,502	3,970	91.76	56.01	41.68	4,465 0 0	26,518	0 2 8
15,403	543	8,850	5,010	1,113	95.77	64.75	67.71	2,250 12 6	20,413	0 1 9
11,919	619	3,913	1,849	518	82.29	54.46	41.11	2,998 13 0	13,768	0 3 6
8,713	906	7,070	3,053	1,369	79.36	53.55	49.45	1,863 13 0	11,766	0 2 6
28,368	65	23,677	15,414	160	93.06	65.54	79.29	5,494 0 0	43,782	0 2 0
9,607	628	6,276	2155	888	91.80	40.00	36.85	2,486 0 0	11,762	0 3 5
7,990	617	631	128	144	89.10	26.28	25.30	1,203 0 0	8,118	0 2 4
12,641	807	1,401	563	401	94.40	56.30	48.89	2,164 1 0	13,204	0 2 7
17,953	203	5,642	2,574	2,436	97.76	80.29	37.58	4,385 11 6	20,527	0 3 5
7,797	94	1,267	761	364	97.44	84.28	56.86	2,255 15 6	8,558	0 4 3
5,736	706	11,822	4,104	2,010	83.26	41.83	52.19	1,922 1 0	9,840	0 3 2
182,272	11,223	126,067	59,358	22,494	92.10	57.31	51.20	40,245 1 6	241,630	0 2 8
11,174	1,623	9,991	4,792	3,248	87.43	71.07	44.37	3,946 8 0	15,966	0 3 11
2,174	874	979	381	311	86.13	57.36	52.09	1,708 14 0	2,555	0 10 8
225	6	174	111	15	84.59	69.81	65.27	203 9 0	336	0 9 8
341,987	22,075	327,438	154,638	57,233	92.39	57.23	55.60	83,196 1 3	496,625	0 2 8

VACCINATION STATEMENT NO. I.—*Showing particulars of Vaccination in the*

No.	Districts or Towns	Population of district according to census of 1931	Average number of vaccinators employed throughout the year	Total number of persons vaccinated			Average number of persons vaccinated by each vaccinator	Primary		
				Male	Female	Total		Total	Success-	
									Under one year	One year and under six years
1	2	3	4	5	6	7	8	9	10	11
	B TOWNS									
	Surma Valley and Hill Division									
1	Silchar .. ..	13,069	1	1,430	800	2,230	2,230	363	147	197
2	Hailakandi.. ..	2,002	..	59	36	95	..	87	6	74
3	Haflong .. ..	1,124	..	27	10	37	..	7	6	1
4	Sylhet .. ..	21,435	2	2,370	726	3,096	1,548	634	365	214
5	Karimganj.. ..	5,691	1	1,103	483	1,586	1,586	231	61	92
6	Maulvi Bazar .. ..	4,314	1	256	35	291	291	136	127	7
7	Sreemangal .. ..	1,540	1	38	32	70	70	59	6	49
8	Habiganj .. ..	7,577	2	3,065	1,289	4,354	2,177	449	81	289
9	Sunamganj.. ..	5,326	1	728	87	815	815	218	12	115
10	Shillong .. ..	21,300	1	486	332	818	818	357	163	178
11	Jowai .. ..	3,024	..	8	11	19	..	16	4	10
12	Kohima .. ..	2,759	..	85	71	156	..	106	6	71
	Total of Surma Valley and Hill Division.	89,161	10	9,655	3,912	13,567	1,357	2,663	984	1,297
	Assam Valley Division									
13	Dhubri .. ..	9,435	1	193	152	345	345	256	142	107
14	Goalpara .. ..	6,415	1	130	136	266	266	241	52	156
15	Gauripore .. ..	5,592	1	383	205	588	588	222	160	44
16	Gauhati .. ..	21,797	2	667	483	1,150	575	632	136	461
17	Barpeta .. ..	13,777	1	594	404	998	998	675	182	430
18	Palashbari .. ..	3,454	..	55	54	109	..	96	19	71
19	Tezpur .. ..	10,268	1	173	171	344	344	317	88	194
20	Mangaldai .. ..	1,696	1	28	29	57	57	40	12	28
21	Nowgong .. ..	10,413	1	987	413	1,400	1,400	487	300	124
22	Jorhat .. ..	8,334	1	169	147	316	316	272	65	180
23	Sibsagar .. ..	6,669	1	156	128	284	284	214	23	161
24	Gotaghat .. ..	4,688	1	87	85	172	172	157	54	79
25	Nazira .. ..	3,484	1	81	30	111	111	74	34	20
26	Dibrugarh .. ..	18,734	1	497	348	845	845	352	123	173
27	Tinsukia .. ..	5,160	1	71	50	121	121	104	10	86
28	Doom Dooma .. ..	1,900	1	7	15	22	22	21	4	17
29	North Lakhimpur .. ..	2,120	1	109	24	133	133	82	21	43
30	Tura .. ..	2,358	..	82	83	165	..	107	33	34
	Total of Assam Valley Division	136,294	17	4,469	2,957	7,426	437	4,349	1,458	2,408



## DEPARTMENT

Province of Assam during the year 1937-38

vaccination		Re-vaccination			Percentage of successful cases in which the results were known		Persons successfully vaccinated per 1,000 of population	Total cost of the Vaccination Department	Number of all successful vaccinations and re-vaccinations performed by the vaccination staff only	Average cost of each successful case performed by the vaccination staff
ful										
Total of all ages	Unknown	Total	Successful	Unknown	Primary	Re-vaccination	19	20	21	22
12	13	14	15	16	17	18		Rs. as. p.		Rs. as. p.
356	3	1,867	162	77	98.89	9.05	39.64	527 2 0	518	1 0 3
85	2	8	..	6	100.00	..	42.46	28 0 0	85	0 5 3
7	..	30	12	..	100.00	40.00	16.90	..	19	..
594	7	2,462	208	420	94.74	10.19	37.42	547 4 0	802	0 10 11
211	4	1,355	447	121	92.95	36.22	115.62	215 0 0	658	0 5 3
136	..	155	77	2	100.00	50.33	49.37	60 0 0	213	0 4 6
58	..	11	2	..	98.30	18.18	38.96	36 0 0	60	0 9 7
429	2	3,905	1,687	899	95.97	56.12	279.27	123 5 0	2,116	0 0 11
203	..	597	94	..	93.12	15.75	55.76	153 0 0	297	0 8 3
356	..	461	193	..	99.72	41.87	25.77	240 0 0	549	0 7 0
16	..	3	..	..	100.00	..	5.29	4 2 6	16	0 4 2
77	19	50	9	8	88.51	21.43	31.17	..	86	..
2,528	37	10,904	2,891	1,533	96.27	30.85	60.78	1,933 13 6	5,419	0 5 9
252	..	89	15	8	98.44	18.52	28.30	358 4 0	267	1 5 6
213	5	25	6	9	90.25	37.50	34.14	32 4 6	219	0 2 4
205	..	366	118	24	92.34	34.50	57.76	258 1 6	323	0 12 9
597	14	518	182	124	96.60	46.19	35.74	491 0 0	779	0 10 1
621	20	323	134	134	94.81	70.90	54.80	421 2 6	755	0 8 11
90	..	13	1	..	93.75	7.69	26.35	49 8 0	91	0 8 8
288	..	27	9	6	90.85	42.86	28.92	379 10 6	297	1 4 5
40	..	17	2	10	100.00	28.57	24.76	91 13 0	42	2 2 11
446	3	913	374	42	92.15	42.94	78.75	347 14 0	820	0 6 9
249	7	44	5	10	93.96	14.71	30.48	275 7 0	254	1 1 4
184	1	70	35	2	86.38	51.47	32.84	250 0 0	219	1 2 3
136	1	15	8	1	87.18	57.14	30.72	265 10 0	144	1 13 6
54	..	37	5	..	72.97	13.51	16.93	313 0 0	59	5 4 11
296	..	493	120	139	84.09	33.90	22.21	304 6 0	416	0 11 8
97	2	17	5	10	95.10	71.43	19.77	255 2 0	102	2 8 0
21	..	1	..	..	100.00	..	11.05	28 12 0	21	1 5 10
82	..	51	30	..	100.00	58.82	52.83	24 0 0	112	0 3 5
67	2	58	11	6	63.81	21.15	33.08	..	78	..
3,938	55	3,077	1,060	525	91.71	41.54	36.67	4,145 15 0	4,998	0 13 3

VACCINATION STATEMENT NO. I.—*Showing particulars of Vaccination in the*

No.	Districts or Towns	Population of districts accord- ing to census of 1931	Average number of vaccinators employed throughout the year	Total number of persons vacci- nated			Average number of persons vaccinated by each vaccinator	Primary		
				Males	Females	Total		Total	Success-	
									Under one year	One year and under six years
1	2	3	4	5	6	7	8	9	10	11
	B TOWNS— <i>concla.</i>									
31	Imphal .. .. .	85,804	3	2,852	1,978	4,830	1,610	2,551	1,145	780
32	Sadiya .. .. .	4,370	1	172	45	217	217	49	14	8
	Total of Towns ..	315,629	31	17,148	8,892	26,040	840	9,612	3,601	4,493
	Total Vaccine Department ..	9,247,857	451	418,677	327,046	745,723	1,653	401,857	55,527	238,119
	Total of Dispensary staff ..	..	..	..	..	8,534	..	1,694	405	695
	Total tea gardens and garden agencies.	..	..	32,981	27,889	60,870	..	33,835	17,870	12,020
	Total Jails, Mental Hospital, Police Hospitals and Infec- tious diseases hospitals.	..	..	5,742	191	5,933	..	122	15	24
	Total of Railway Dispensaries	..	..	3,621	1,226	4,847	..	509	62	355
	Total of private Medical Prac- titioners.	..	..	..	..	..	..	..	..	..
	Shillong Vaccine Depôt ..	..	..	..	..	..	..	..	..	..
	Grand total ..	9,247,857	451	461,021	356,352	825,907	1,831	438,017	73,879	251,213

Sum

	Total number of persons vaccinated		Total number of operations performed		Percentages of successful cases in which the results were known	
	Primary	Re-vaccination	Primary	Re-vaccination	Primary	Re-vaccination
1	2	3	4	5	6	7
By special staff—						
Districts excluding towns	392,245	327,438	392,245	327,438	92·39	57·23
Towns ... ..	9,612	16,428	9,612	16,428	93·25	37·33
Total ...	401,857	343,866	401,857	343,866	92·40	56·26
By dispensary staff ...	1,694	6,840	1,694	6,840	80·27	54·36
By private Medical Practitioners.	...	...	...	...	...	...
By Railway dispensaries	509	4,338	509	4,338	94·20	41·38
By other agencies, Tea Gardens, Jail hospitals, Police hospitals Mental hospitals and infectious diseases hospital.	33,957	32,846	33,957	32,846	93·00	74·01
Total ...	36,160	44,024	36,160	44,024	92·48	68·78
Shillong Vaccine Depot ...	...	...	...	...	...	...
Grand total ...	438,017	387,890	438,017	387,890	92·41	57·74



DEPARTMENT

Province of Assam during the year 1937-38

vaccination		Re-vaccination			Percentage of successful cases in which the results were known		Persons successfully vaccinated per 1,000 of population	Total cost of the Vaccination Department	Number of all successful vaccinations and re-vaccinations performed by the vaccination staff only	Average cost of each successful case performed by the vaccination staff
ful										
Total of all ages	Unknown	Total	Successful	Unknown	Primary	Re-vaccination				
12	13	14	15	16	17	18	19	20	21	22
								Rs. as. p.		Rs. as. p.
2,154	249	2,279	1,175	463	93·57	64·70	38·08	1,223 2 0	3,329	0 5 11
25	..	168	59	16	51·02	38·82	19·22	..	84	..
8,645	341	16,428	5,185	2,537	93·25	37·33	43·82	7,302 14 6	13,830	0 8 5
350,632	22,416	343,866	159,823	59,770	92·40	56·26	55·20	90,498 15 9	510,455	0 2 10
1,204	194	6,840	2,602	2,053	80·27	54·36	..	..	..	..
31,326	184	27,035	19,291	1,982	93·09	77·00	..	..	..	..
68	16	5,811	2,978	776	64·15	59·15	..	..	..	..
471	9	4,338	1,336	1,109	94·23	41·38	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	16,698 0 0	..	..
383,701	22,819	387,890	186,030	65,690	92·41	57·74	55·20	1,07,196 15 9	510,455	0 3 4

mary

Average number of persons vaccinated by each vaccinator		Number of children successfully vaccinated		Ratio of successful vaccinations per 1,000 of population	Total cost of Department	Number of all successful vaccinations performed	Average cost of each successful case
Vaccinators employed	Persons vaccinated by each vaccinator	Under one year	One and under six years				
8	9	10	11	12	13	14	15
					Rs. a. p.		Rs. a. p.
420	1,714	51,926	233,626	55·60	83,196 1 3	496,625	0 2 8
31	840	3,601	4,493	43·82	7,302 14 6	13,830	0 8 5
451	1,653	55,527	238,119	55·20	90,498 15 9	510,455	0 2 10
...	...	405	695	...	...	...	...
...	...	...	...	...	...	...	...
...	...	62	355	...	...	...	...
...	...	17,885	12,044	...	...	...	...
...	...	18,352	13,094	...	...	...	...
...	...	...	...	...	16,698 0 0	...	...
451	1,831	73,879	251,213	55·20	1,07,196 15 9	510,455	0 3 4

## B.—DISPENSARY

IMPERIAL STATEMENT NO. II.—*Showing Dispensary Vaccination*

Districts	Number of dispensaries in each district to which a vaccinator is attached	Average number of vaccinators attached to dispensaries during the year.	Total number of persons vaccinated	Average number of persons vaccinated by each vaccinator	Primary vaccination				
					Total	Successful			Unknown
						Under one year	One year and under six years	Total of all ages	
1	2	3	4	5	6	7	8	9	10
Cachar ...	...	...	...	...	...	...	...	...	...
Sylhet ...	...	...	606	...	220	10	137	197	4
Khasi and Jaintia Hills ...	...	...	178	...	92	24	16	44	46
Naga Hills ...	...	...	37	...	18	1	17	18	...
Lushai Hills ...	...	...	164	...	91	10	36	46	...
Goalpara ...	...	...	721	...	41	3	24	31	2
Kamrup ...	...	...	...	...	...	...	...	...	...
Darrang ...	...	...	900	...	15	...	...	6	7
Nowgong ...	...	...	33	...	6	1	5	6	...
Sibsagar ...	...	...	18	...	8	2	2	4	...
Lakhimpur ...	...	...	153	...	91	8	21	29	...
Garó Hills ...	...	...	607	...	380	84	186	279	40
Manipur State ...	...	...	4,925	...	583	167	222	414	80
Sadiya Frontier Tract ...	...	...	154	...	117	85	17	102	15
Balipara Frontier Tract ...	...	...	38	...	32	10	12	28	...
Total ...	...	...	8,534	...	1,694	405	695	1,204	194

IMPERIAL STATEMENT NO. III.—*Showing the number of persons primarily vaccinated in each of the under*

Persons prima-

Vaccinating Agents	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number
	Year ending								
	1922-29		1929-30		1930-31		1931-32		1932-
1	2	3	4	5	6	7	8	9	10
Government ...	50,560	44,570	36,803	32,086	38,520	33,353	41,320	37,769	35,322
Dispensaries ...	5,662	4,503	2,851	2,231	2,539	2,217	2,753	2,108	2,139
Municipal ...	7,231	6,744	4,935	4,645	4,752	4,521	5,900	5,542	5,846
Local Funds ...	288,661	270,257	260,658	238,776	250,393	230,321	250,148	221,525	284,814
Licensed Vaccinators ...	...	...	...	...	...	...	...	...	...
Apprentices ...	713	657	1,132	962	1,145	1,078	600	555	446
Native States ...	19,366	14,258	18,240	16,171	17,403	15,203	17,551	15,484	15,530
Tea Garden and garden agencies.	...	...	...	...	...	...	...	...	...
Jails, Mental Hospitals, Police Hospitals and Infectious diseases Hospitals.	...	...	...	...	...	...	...	...	...
Railway Dispensaries ...	...	...	...	...	...	...	...	...	...
Total ...	372,193	340,989	324,619	294,871	314,752	286,693	318,272	282,983	344,097



## VACCINATION

in the Province of Assam during the year 1937-38

Re-vaccination			Percentage of successful cases in which the results were known		Percentage of unknown cases to total cases	
Total	Successful	Unknown	Primary	Re-vaccination	Primary	Re-vaccination
11	12	13	14	15	16	17
...	...	...	...	...	...	...
386	153	37	91.20	43.84	1.82	9.59
86	1	72	95.65	71.43	50.00	83.72
19	16	3	100.00	100.00	...	15.79
73	11	1	50.55	15.28	...	1.37
680	289	112	79.49	50.88	4.88	16.47
...	...	...	...	...	...	...
885	228	154	75.00	31.19	46.67	17.40
27	4	3	100.00	16.67	...	11.11
10	6	...	50.00	60.00	...	...
62	46	...	31.87	74.19	...	...
227	71	61	82.06	42.77	10.53	26.87
4,342	1,753	1,595	82.31	63.82	13.72	36.73
37	22	15	100.00	100.00	12.82	40.54
6	2	...	87.50	33.33	...	...
6,840	2,602	2,053	80.27	54.36	11.45	30.01

and the number of those who were successfully vaccinated in the province of Assam mentioned official years.

rily vaccinated

Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number
--------------------------------	--------------	--------------------------------	--------------	--------------------------------	--------------	--------------------------------	--------------	--------------------------------	--------------	--------------------------------	--------------

31st March.—

33	1933-34		1934-35		1935-36		1936-37		1937-38	
11	12	13	14	15	16	17	18	19	20	21
31,076	37,101	30,405	59,210	32,596	37,114	28,573	49,047	37,407	39,926	32,576
1,629	2,161	1,759	3,414	2,862	5,091	3,359	2,388	1,839	1,694	1,204
5,582	5,603	5,336	6,376	6,106	9,926	9,481	5,897	5,485	6,776	6,299
257,327	311,975	272,296	296,742	272,775	325,199	293,466	323,815	272,546	337,418	297,724
...	...	...	...	...	...	...	...	...	...	...
406	643	507	1,218	1,142	260	251	1,202	1,168	782	705
14,782	16,104	14,219	16,129	15,185	15,599	1,285	24,445	19,908	16,955	13,328
...	...	...	...	...	...	...	30,628	28,022	33,835	31,326
...	...	...	...	...	...	...	152	120	122	68
...	...	...	...	...	...	...	343	326	509	471
310,802	373,587	324,522	383,089	330,666	393,189	336,415	437,917	366,821	438,017	383,701

STATEMENT IV—Showing the number of Vaccinations performed in Municipal towns on children under one year of age during the year 1937-38

Districts	Towns	Number of births during the year	Number of deaths amongst children under one year during the year	Number of successful Vaccination on children under one year during the year ending 31st March 1938	Date of extension of Vaccination Act to town
1	2	3	4	5	6
Cachar ...	{ Silchar ...	279	26	124	21st January 1892.
	{ Hailakandi ...	108	14	1	10th November 1922.
	{ Sylhet ...	748	94	341	1st October 1882.
	{ Habiganj ...	255	65	60	11th December 1913.
Sylhet ...	{ Sunamganj ...	214	46	92	28th June 1915.
	{ Karimganj ...	190	27	56	27th July 1915.
	{ Maulvi Bazar ...	145	12	127	16th April 1916.
	{ Sreemangal ...	37	5	6	9th October 1936.
Khasi and Jaintia Hills.	{ Shillong ...	805	81	341	21st June 1895.
	Total of Surma Valley and Hill Division.	2,781	370	1,148	
	{ Dhubri ...	303	42	178	13th February 1891.
Goalpara ...	{ Goalpara ...	214	21	43	12th November 1890.
	{ Gauripur ...	168	41	65	15th September 1922.
	{ Gauhati ...	728	84	447	August 1882.
Kamrup ...	{ Barpeta ...	701	74	309	29th October 1915.
	{ Palashbari ...	193	22	91	16th November 1927.
	{ Tezpur ...	337	34	73	22nd May 1907.
Dairang ...	{ Mangaldai ...	43	7	31	12th October 1916.
Nowgong ...	Nowgong ...	434	39	282	7th April 1897.
	{ Sibsagar ...	206	11	25	21st January 1892.
Sibsagar ...	{ Jorhat ...	306	40	150	12th April 1892.
	{ Golaghat ...	173	20	19	24th March 1892.
	{ Nazira ...	91	15	35	1st December 1916.
	{ Dibrugarh ...	491	61	123	September 1883.
Lakhimpur ...	{ Doom Dooma ...	30	...	4	21st October 1918.
	{ Tinsukia ...	174	19	10	31st August 1922.
	Total of Assam Valley Division.	4,592	530	1,885	
	Total for the Province.	7,373	900	3,033	



IMPERIAL STATEMENT No. V.—Showing side by side the ratio (per 1,000 of population) of deaths from small-pox and the number of successful vaccinations during the ten years ending 1937-38

	1928-1929				1929-1930				1930-1931				1931-1932				1932-1933				1933-1934				1934-1935				1935-1936				1936-1937				1937-1938			
	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21																				
Cachar..	1.61	65,942	.32	30,687	.04	19,418	..	19,255	..	24,418	..	22,822	..	27,002	..	28,069	.06	28,725	.11	33,434																				
Sylhet ..	1.79	219,845	.15	145,407	.04	129,243	.01	108,508	.004	116,176	.02	111,605	.02	120,612	.04	122,728	.25	143,670	.66	167,689																				
Khasi and Jaintia Hills ..	.06	29,559	.03	13,574	..	12,967	.003	14,093	..	15,222	..	13,654	..	18,494	..	21,296	..	18,902	..	18,384																				
Naga Hills ..	..	5,374	..	5,845	..	5,325	..	6,044	..	6,758	..	6,432	..	8,516	..	7,951	..	13,140	..	13,380																				
Lushai Hills ..	..	10,632	..	11,771	..	5,037	..	4,914	..	7,499	..	7,986	..	4,317	..	3,113	..	3,083	..	9,156																				
Goalpara ..	1.20	49,433	.26	55,246	.61	51,704	.29	65,171	.30	110,298	.04	94,802	.01	74,769	.002	56,281	.003	65,624	.008	54,503																				
Kamrup ..	.37	49,392	.21	49,553	.29	49,825	.17	46,086	.17	41,043	.07	46,478	.10	46,534	.26	82,942	.27	55,250	.12	48,556																				
Darrang ..	.10	26,664	.08	26,726	.15	35,005	.04	24,716	.05	28,454	.04	30,935	.06	38,890	.05	42,799	.06	49,973	.04	26,107																				
Nowgong ..	.06	26,871	.01	27,908	..	28,873	..	28,507	..	28,051	.002	28,922	.03	37,916	.04	51,159	.06	52,967	.35	44,612																				
Sibsagar ..	.06	37,525	.02	39,509	.03	41,950	.07	34,567	.06	30,493	.04	35,214	.01	36,946	.13	44,429	.02	42,484	.006	33,770																				
Lakhimpur ..	.15	20,639	.26	21,346	.27	25,601	.11	18,877	.03	24,440	.008	28,118	.01	34,550	.001	32,652	.002	29,148	.006	29,811																				
Garo Hills ..	.35	22,531	.06	21,541	.13	18,997	.15	14,948	.03	13,978	.06	21,342	..	18,855	.01	13,852	..	11,484	.005	10,268																				
Manipur State ..	..	41,077	..	30,444	..	19,284	..	18,726	..	20,313	..	20,293	..	7,890	..	29,127	..	30,042	..	21,462																				
Sadiya Frontier Tract ..	..	4,793	..	4,385	.02	6,777	..	4,123	.09	2,878	..	2,552	..	5,131	..	8,529	..	2,980	..	2,763																				
Balipara Frontier Tract ..	..	..	..	..	..	..	..	291	..	478	..	514	..	400	..	669	..	456	..	366																				
Total ..	.86	610,277	.14	483,942	.14	450,006	.07	408,831	.06	470,499	.03	471,669	.02	480,852	.07	545,596	.12	547,928	.25	514,261																				





# GOVERNMENT OF ASSAM

## ORDERS BY THE GOVERNOR

### Resolution on the Public Health Report of the Province of Assam for the year 1937

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*Extracts from the proceedings of the Government of Assam in the Local Self-Government Department, Public Health Branch, No.358-L.S.-G., dated the 23rd January 1939*

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READ—

The Public Health Report for the year 1937

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### RESOLUTION

The report on Public Health for the year 1937 has been delayed by a number of factors, many of which were avoidable. The collection of statistics and their collation necessarily involve delay before the results are available to the public, but for this very reason Government trust that in future all concerned will endeavour to expedite each stage of preparation as much as possible. It may be observed that a very successful Health Exhibition held at Shillong in the spring of 1938, which it is to be hoped will be the precursor of much enlivened activity in the public health field, would not at the rate of publication achieved in respect of the year 1937 receive official mention until 1940.

2. The year cannot in general be described as a healthy one. Cholera, small-pox, dysentery, diarrhoea, fevers and *kala azar* all increased their toll of the population. Greater prevalence of the last-named in some parts of Goalpara, Nowgong and Sibsagar, and a higher mortality in several districts, have awakened anxiety in the public mind, and Government are glad to observe that the attention of the Central Health authorities has been drawn to the need of reviewing policy and methods in regard to this scourge. In view of the long continued efforts that have been made on the basis of voluntary vaccination, reinforced of recent years by local compulsion in the face of threatened severe outbreaks, the marked rise in mortality from small-pox, from 963 to 2,187, is also somewhat disheartening. The laxity of administration in several towns, where vaccination is compulsory, does not give much hope that a solution lies merely in tightening the provisions of the law.

3. The recorded birth and death rates, corrected according to the population estimated for this stage of the intercensal period, both rose, from 30·24 to 31·31 and from 19·63 to 22·21, respectively. It is of course impossible to draw any conclusions from these bare figures: the rises may be due to an improvement in the registration, defective as this still is, or to sociological factors, or to a combination of both. Government share the Director's view that much more attention should be paid to the verification of vital statistics and supervision of vaccination. It is a serious matter that less than half the children born are vaccinated within a year of birth, even where vaccination is supposed to be compulsory. The increase in infant mortality makes any inferences that might be drawn from the higher birth-rate gloomy rather than the reverse: no less than 39,727 infants died within a year of birth. The report rightly lays stress upon the magnitude of the work waiting to be done in maternity and child welfare. The interesting facts given show that much has been achieved by philanthropic societies and individuals to break down apathy and establish the foundations of an organization for tackling this vital problem, but the absence of a stable source of funds for maintenance of health visitors is a serious obstacle to development. The local bodies, who might naturally be expected to foster these efforts, are unfortunately ill supplied with resources, and they do not look with particular favour on plans for the payment of this class of worker. Yet effort in this field, if it is to have any real effect, must be sustained, and the health visitor is therefore at the present stage of progress most necessary. Spasmodic work, as it must be when it is not the work of any particular person, is bound to be ephemeral.



4. The Assam Medical Research Society continued to do most valuable work. The results of its general programme, as well as of the rural treatment and anti-larval schemes, remain to be evaluated, as it is hoped they will be in the near future, but even the figures of 1937 appear to indicate a prospect of very hopeful advances in knowledge. The marked rise in mortality from "fevers" shows that malaria shared with other diseases in this class a moderate severity in incidence, and it is certain that in the interests of the general health level as well as the reduction of preventable death this disease will always demand very serious attention in Assam. There was some increase in the quinine treatments sold through the agency of the department, which is satisfactory in view of the fact that free quinine distributed by the Government of India continued in this year.

5. This year saw a first step taken towards coping with the menace of Tuberculosis, which has attracted much public concern. A clinic was opened at Shillong, which has since done very valuable work. In this sphere also the need of the regular home visitor is of great importance. It is hoped that with the funds available from Her Excellency the Marchioness of Linlithgow's appeal and the expenditure of much careful thought upon the manner in which these moneys may be most usefully employed, a practical beginning may be made with the campaign against this disease, and its growth checked.

6. There was a decrease of 46,719 in the total of vaccination operations performed, which Government must deplore, and they trust that the local bodies will take note of the dangers that still lie in the path of any failure to be vigilant in this branch of their duties.

7. In regard to the more general aspects of the Department's work, the report contains many illustrations of the need for an awakened consciousness both among the public and in the local bodies for the claims of public health. Interest there is in plenty, but there are too many instances of failure to bring that interest into practical effect. The total expenditure of local boards throughout the province on sanitary measures, including the most vital matter of water-supply, was only Rs.1,61,160. Only nine samples of food and drink were sent for analysis by local boards, and the administration of the Pure Food Act even in many towns was not notable for earnestness, either on the part of the authorities or in the sentences, inflicted by magistrates. As the Director hints, if local bodies were really using their powers for the benefit of public health, they would find it necessary to display much more attention in the matter of housing conditions, especially in the towns, even if they have not the means or the powers to embark on housing schemes, which are considered of so much importance in more advanced countries. Government also desire to repeat their observations on the last year's report as to the greater activity that may be properly shown by their own officers. The report mentions that in one district there was no medical inspection of mines.

8. In conclusion Government desire to thank Lieutenant-Colonel Hesterlow and his officers for much valuable work, which they are satisfied shows the willingness of the department to do all that is possible with existing means to co-operate with the population towards the well-being of the province. They have read the report with much interest.

By order of the Governor of Assam,

SHILLONG :

H. G. DENNEHY,

*The 23rd January 1939.*

*Secretary to the Government of Assam  
in the Education and Local Self-Government Departments.*





